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NEWS SUMMARY

GENERAL

Gandhi rivals concede defeat

Former Prime Minister Indira Gandhi made a spectacular political comeback when the party that ousted her from power in 1977 conceded defeat in India's general elections.

The Janata Party conceded with just over a quarter of the results in and with only nine of the 544 Lok Sabha (Lower House) seats held. The ruling Lok Dal Party trailed behind Janata.

Mrs. Gandhi predicted that she would win more than 350 seats, which would give her a parliamentary majority of about two-thirds. Back and Page 3. Editorial comment, Page 18

Adamson killing: three questioned

Naturalist and author Joy Adamson was murdered and three of her former employees—all Kenyans—are being questioned, Kenyan police said.

Mrs. Adamson was reported to have been killed by a lion but a post mortem examination found that the wounds on her body were not caused by claws.

Hostages move

UN Secretary General Kurt Waldheim said Iranian Foreign Minister Sadeq Qotbzadeh had assured him that the Tehran hostages would be freed after an international inquiry into the alleged excesses of the deposed Shah's regime. They would not be released before or during such an inquiry. Iran economy, Page 3

Stormont row

The Ulster constitutional conference at Stormont began with a clash between Social Democratic and Labour Party leader John Hume and Democratic Unionist leader Ian [illegible]. The row apparently centred on Mr. Paisley's attempt to have discussions of Irish unity delayed or abandoned. Page 6

Belgian crisis

Belgium is on the brink of a political crisis that could topple the coalition government and bring fresh elections 13 months after the last polls. Two political parties are considering leaving the coalition in a row over regionalisation plans. Page 2

Kagan charges

Court committal proceedings involving tax fraud charges began in Leeds against Lady Kagan, wife of life peer Lord Kagan, and four others. Two companies are also charged. Page 7.

Benn attack

The Government "Think Tank"—the Central Policy Review Staff—has been engaged in organised subversion against Ministers who stood up to the Civil Service, said leading Labour Left-winger Anthony Wedgwood Benn. Page 6; Lombard, Page 16

£201,117 ransom

Left-wing guerrillas in Colombia have demanded a $450,000 (£201,117) ransom for the return of a British woman and her son kidnapped from their ranch. Columbia's Defence Ministry staid.

Briefly . . .

Shopkeepers protesting against price controls caused an explosion which badly damaged the state Price Commission office in Paris and hurt five people.

Dutch police said a 57-year-old cabinet-maker admitted throwing a cigarette end into a Rotterdam house, starting a blaze which killed 11.

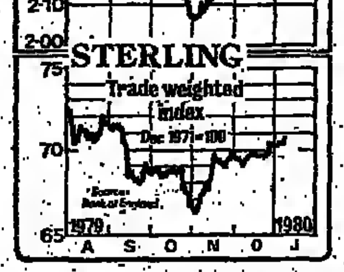
BUSINESS

Equities firm; £ gains 2.45 cents

● EQUITIES rose reflecting hopes for an end to the steel strike, which more than outweighed the Middle East tension. The FT 30-share index gained 6.0 at 419.9.

● GILTS shrugged off the prospect of persistent high interest rates to regain most early losses, although Exchequer 15 per cent 1985 shed ¾. The FT Government Securities Index eased 0.02 to 65.67.

● STERLING rose 2.45 cents to $2.2620 ($2.2375) against the dollar and its trade-weighted



index rose to 70.8 (70.3). The pound rose too against all other major currencies.

● DOLLAR fell to DM 1.7080 (DM 1.7110) and SwFr 1.5695 (SwFr 1.5775) but finished above its worst levels. Its index fell to 84.0 (84.4).

● GOLD rose $ 40 an ounce to $630 in active trading to equal its all-time closing high.

● WALL STREET was up 6.31 at 835.15 shortly before the close.

● INDUSTRIAL raw material costs are rising faster than wholesale output prices at a time when labour and interest charges are also increasing, so an intensification of the squeeze on profit margins is indicated. Back Page

● BUILDING SOCIETIES do not expect an early fall in the 15 per cent mortgage rate, and think that when it does come it may not fully reflect the decline in interest rates. Page 6

● ENERGY DEPARTMENT is expected to back the Coal Board's plan to sink three mines in the Vale of Belfour when the public inquiry on the scheme resumes today. Page 7

● NEW TECHNOLOGY must be introduced faster if Britain is to survive as a trading nation, according to a report by the Government Advisory Council for Applied Research and Development. Back and Page 19

● VENEZUELA is cutting its oil supplies to the major international companies in 1980 under sales agreements to be formalised soon. Page 4

COMPANIES

● BROWN AND TAWSE, steel and tube stockholders made taxable profits in the half year to last September 30 of £2.07m (£2.03m) on sales of £28.51m (£24.59m). In the full year, pre-tax profits rose 15 per cent to £3.81m. Page 20

● A. G. BARR & COMPANY reports pre-tax profits for the year ended last October 27 rose to £2.53m (£2.01m) on a 15.9 per cent increase in turnover. Page 20

● J. BIBBY & SONS will acquire for about £4.4m the outstanding 60 per cent of shares in an asociate company, Sterilin. Page 20

● INTERNATIONAL Harvester Australia staged a recovery in the year to October 31, 1979, with a profit of A$6.44m (£3.24m) after a previous loss of A$3.5m (£1.76m). Page 24

CHIEF PRICE CHANGES YESTERDAY

(Prices in pence unless otherwise indicated)

RISES		
Asscd. Newspapers	260	+ 9
Blua Circle	252	+ 12
Booker McConnell	265	+ 10
Bowring (C. T.)	142	+ 19
Coral Leisure	66	+ 3
Cropper (J.)	107	+ 7
Decca A	293	+ 24
Ferranti	420	+ 13
Finlay (James)	74	+ 4
Grimshewe	65	+ 5
Hanson Trust	130	+ 8
Hay's Wharf	127	+ 8
Home Charm	152	+ 8
ICI	363	+ 5
Kennedy Smale	59	+ 6
KwikSave	108	+ 6
Metal Box	238	+ 6
Racal Elec.	198	+ 8
Samuel (H.)	135	+ 10
Sanger (J. E.)	18	+ 3
Vickers	111½	+ 5
Aran Energy	260	+ 32
Williamson Tea	190	+ 8
Anglo-Amer. Coal	£11½	+ 1
Anglo-Amer. Crpn.	665	+ 25
Cons. Gold Fields	425	+ 11
Doornfontein	494	+ 54
Impala	258	+ 8
Leonard Oil	90	+ 30
Libanon	786	+ 41
Loraine	200	+ 20
Pacific Copper	134	+ 13
Poseidon	126	+ 8
Silvermines	100	+ 10
Spargos Exploration	39	+ 4
Venterspost	488	+ 43
FALLS		
Appleyard	58	− 4
Reardon Smith	93	− 5
BP	332	− 8
Silkolene	132	− 16

Early end to steel strike seems remote as picketing widens

BY ALAN PIKE AND NICK GARNETT

Chances of an early end to the national steel strike appeared increasingly remote last night while picketing was strengthened and widened.

The day began with a meeting between union representatives led by Mr. Len Murray, TUC general secretary, and the full BSC Board. Mr. Murray remained at BSC's London headquarters while Mr. Bill Sirs, Iron and Steel Trades Confederation general secretary, and Mr. Hector Smith, National Union of Blastfurnacemen general secretary, reported to a joint meeting of their executives.

Mr. Sirs and Mr. Smith then returned to BSC to hear the Corporation's reply to propoaals put by the unions earlier in the day. As he entered the meeting Mr. Sirs said: "I do not think we will make the progress necessary to resume negotiations."

Strike committees in most regions decided yesterday that pickets should try and halt movement of all steel to and from stockholders whether or not it was manufactured by the corporation or private steel makers.

Some steel consumers, particularly engineering companies, were also picketed in Yorkshire and Wales and some private steel makers appear to be increasingly affected. Police intervened during clashes between pickets and employees still working at the corporation's Port Talbot plant in South Wales.

Yesterday's union executive meeting reaffirmed that private steel manufacturers, which are not involved in the dispute, should be allowed to work normally.

The joint executive will reconvene today to hear a final report on the talks. But at yesterday's executive meeting members made it clear they would not consider calling off the strike on the basis of BSC's offer of 8 per cent at national level plus local productivity deals.

Mr. Sirs said: "We had a very full discussion in the executive and, as I feared, attitudes have hardened considerably."

The meeting with BSC, said Mr. Sirs, had not produced the progress he was hoping for and the corporation continued to make an offer with all sorts of strings attached. He had originally hoped the strike would be a short, sharp encounter but it now appeared likely it would drag on a little.

Executive members reported strong support for the action around the country and told Mr. Sirs strikers were not in a mood to compromise in their demand for a settlement which would protect them against inflation.

There is a danger that unless the present peace initiative succeeds against expectations it will leave the two sides further apart than ever.

The unions have demanded that BSC put another 5 per cent on the table as proof that money will be available through local productivity deals. But the corporation believes any money paid in this way would fail to achieve the required productivity improvements and would be regarded simply as part of an overall national settlement.

Union leaders remain opposed to the condition on job flexibility, manning and negotiating practices which BSC is demanding in return for an 8 per cent national offer.

Picketing widens Pafie 7

SHIPBUILDING PAY TALKS

British Shipbuilders is to start its pay talks with the shipbuilding unions tomorrow faced with the same kind of pay problems as the British Steel Corporation.

The shipbuilding unions have tabled a pay claim which they estimate to be worth about 20 per cent but which British Shipbuilders says is about 30 per cent. The union negotiators expect to be offered a very low initial pay proposal although they have warned that their 80,000 members will not accept less than 17½ per cent.

British Shipbuilders has been told by the Government it cannot loose more than £90m in the next financial year.

Page 7

Cabinet to review cost of public sector pensions

BY RICHARD EVANS, LOBBY EDITOR

THE CABINET is considering ways in which civil servants can be required to contribute more to the cost of their pensions in its wide-ranging attempt to cut public expenditure in the next financial year by a further £2bn.

Ministers are determined to find a way of modifying the present system because of the increasing drain on the public purse at times of high inflation and the imbalance that has developed between privileged public employees and the private sector.

The Treasury and other departments are developing a strategy under which public employees would be required to pay more for the benefits they received.

It is considered impossible to end inflation-proofing in the public service altogether, because of opposition from the considerable numbers of people involved and the Government's legal obligations to its employees.

About 1.3m people benefit from inflation-proofed pensions, including police, local government officers, teachers, members of the armed forces, nationalised industry employees and civil servants.

Public service pensions are technically non-contributory but in practice civil servants forgo an average of 7 per cent of their salaries following regular comparability studies of outside schemes.

Some Ministers are keen to increase this amount. The Civil Service Pay Research Unit is gathering evidence on comparability for the next pay settlement due April 1.

Bid values Bowring at £245m

BY JOHN MOORE

MARSH AND MCLENNAN of the U.S., the world's largest insurance broker, is prepared to mount a £245m bid for C. T. Bowring, the British insurance broker with banking, credit finance and large Lloyd's of London interests.

But if this bid is to go ahead Marsh has asked for Bowring's agreement that it will not seek to frustrate the offer. Bowring said last night that it is considering the offer "and a further announcement will be made in due course."

On the London Stock Exchange Bowring's shares rose 19p to 142p valuing the group's ordinary share capital at £155m. Allowing for the conversion of Bowring's loan stock capital, the group's market value rises to nearly £206m.

Marsh's bid places a value of about 169p per share on each share of Bowring, which, again allowing for the conversion of the loan stock capital, places a value of £245m on the whole Bowring group.

Marsh and McLennan's bid comes just three weeks after its earlier announcement. This said that it was considering bidding for Bowring following the acrimonious breakdown in negotiations between the two groups over a plan to coordinate and combine all their respective insurance interests in a pooling arrangement.

Since then Bowring has sought to stave off advances from Marsh through legal action in the U.S. courts. The legal moves were designed to stop Marsh from using confidential information supplied during talks about a pooling arrangement in furtherance of a bid.

But this initial attempt suffered a setback last Friday when the judge refused to grant Bowring a temporary restraining order.

Marsh's proposed offer, which is to be arranged as a mixture of Marsh's shares as well as cash, comes after an angry letter from Bowring's chairman, Mr. Peter Bowring. In his letter to Mr. John Regan, the U.S. group's chairman, Mr. Bowring had said that any offer made to the shareholders of C. T. Bowring "by whatever means and on whatever terms" would be considered "an unfriendly act."

He said: "We are unanimous in our determination to resist any such offer by every means available to us and this cannot exclude obtaining support in the City of London and elsewhere from whatever institutional bodies are sympathetic to our very strongly held views."

One way in which the Marsh bid might be blocked is through the application of the contro-

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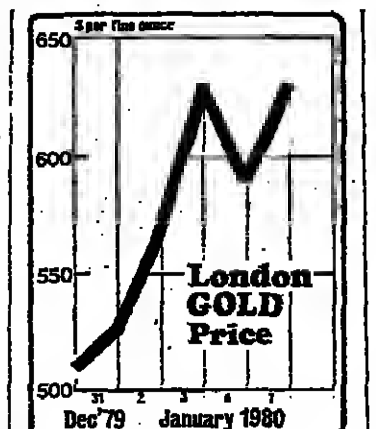


Gold up again to $630

By Peter Riddell, Economics Correspondent

THE PRICE of gold jumped $40 to $630 an ounce in active two-way trading in London yesterday. This exactly offset the decline on Friday and left the price equal to its record closing high.

Earlier in Hong Kong, the price touched $680 before quickly falling to $645 at the European opening.

The latest surge in the gold price started at the weekend when the Hong Kong price was $630. It was triggered by President Carter's announcement of a reduction in grain sales to the Soviet Union.

There were the familiar side-effects in the silver markets and the spot price in London was fixed $6.25 up at $39.

Strong

The dollar slipped to DM 1.7080 from DM 1.7110 on Friday. Its trade-weighted index, as calculated by the Bank of England, fell 0.4 points to 84.0.

Sterling and the yen were very strong. The pound rose 2.45 cents against the dollar to $2.2620, its highest level for five months. It also rose against the main Continental currencies. Its trade-weighted index rose 0.5 points to 70.8.

The yen was boosted by the settlement of new oil contracts with Iran. As a result the dollar slipped Y3 to Y231.5.

David Marsh writes from Basle: Central bankers meeting at the Bank for International Settlements yesterday ruled out concerted gold sales efforts by industrialised countries trying to break the rapid rise of the bullion price.

Money Markets Page 25

£ in New York

—	Jan. 4	Previous
Spot	$2.2390-2410	$2.2340-2355
1 month	0.33-0.28 dis	0.51-0.46 dis
3 months	1.20-1.15 dis	1.30-1.25 dis
12 months	4.35-4.15 dis	4.65-4.45 dis

U.S. to buy in embargoed Soviet grain

BY OUR U.S. STAFF

VICE-PRESIDENT Walter Mondale yesterday announced that the U.S. Government would offer to buy some 14m tonnes of grain previously contracted for sale to the Soviet Union.

The move followed President Carter's decision on Friday to suspend all grain shipments to the Soviet Union in the current year in excess of the 8m tonne annual level set in the five-year U.S.-Soviet grain agreement that runs out next year.

Mr. Bob Bergland, the Agriculture Secretary, said the Government would, for the time being, hold the 14m tonnes of wheat, maize and soyabeans in storage and release it on to the market in an orderly manner at some later date.

Earlier, grain dealers had expected a slump in prices and heavy losses for some participants in the grain trade — including farmers and exporters.

The President's move—and his decision to order that major U.S. grain futures markets close for two days—had come under heavy attack. Doubts were expressed about the ability of the Government to mitigate some of the losses.

John Wyles writes from Brussels: The EEC is expected to give firm assurances to President Carter that it will not help to plug the gap in Russian grain supplies caused by partial U.S. embargo.

But whether words will be immediately backed by concrete actions may depend on whether the European Commission is prepared to use its substantial discretionary authority over agricultural exports without a precise mandate from member governments.

Both the UK and West Germany seemed ready yesterday to support measures to back the U.S. retaliation for Russia's invasion of Afghanistan but France's position appeared far more equivocal.

The 13-man commission will try to determine its policy at its weekly meeting in Brussels tomorrow. Its thinking will then be taken to the meeting President Carter has called in Washington on Saturday by M. Claude Villain, the Director General in charge of agriculture.

Robert Maothuer in Paris, writes: The French Government has made it clear that, though it condemned the Soviet military intervention in Afghanistan, it would not join the U.S. in taking any economic or other reprisals against Moscow.

M. Jean François-Poncet, the French Foreign Minister said the Soviet action had seriously undermined the prospects for East-West detente. But it was in nobody's interest to provoke a further deterioration in the situation by resuming the cold war.

Asked whether France would step up its grain exports to the Soviet Union to make up for the loss of U.S. supplies, he said no cereals were available for such a purpose.

The invasion of Afghanistan Pages 4 and 18
Farming and raw materials Page 29

Troops in Afghanistan 'may be permanent force'

BY DAVID BUCHAN IN WASHINGTON

THE SOVIET force of 50,000-60,000 already in Afghanistan is "probably the core of a larger permanent force to be deployed there," the U.S. Government said yesterday.

Moscow's continued build-up in Afghanistan at the weekend amounted to "a contemptuous rejection both by word and deed" of protest by the U.S. and many other countries, Mr. Hodding Carter, the State Department spokesman, said.

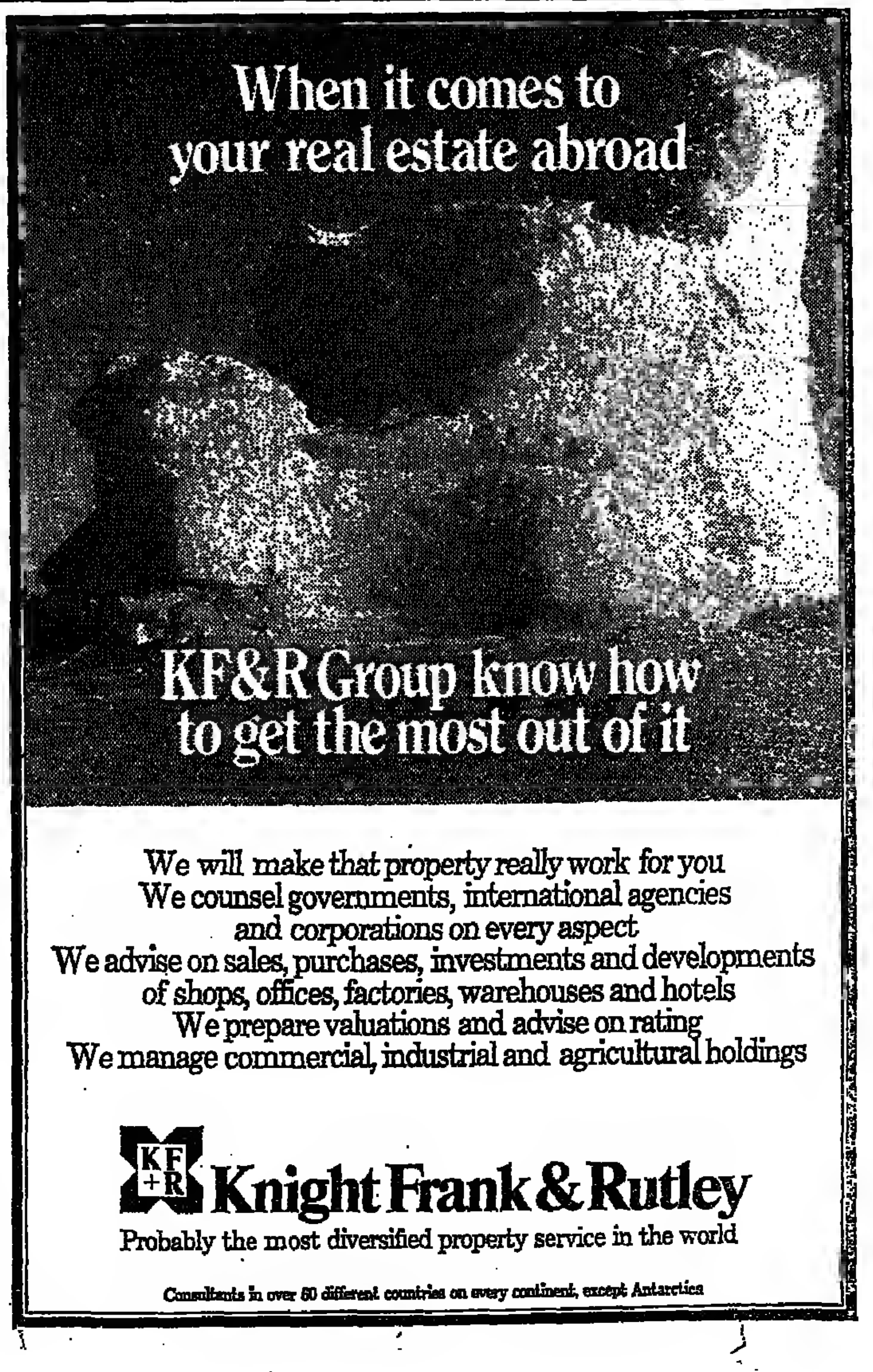
Since last Friday, when President Carter announced a ban on further sales of U.S. grain and high technology to the Soviet Union and barred Soviet Fishermen from American waters, the Soviet Union had mobilised one and maybe two motorised divisions more. These might have crossed into Afghanistan already, Mr. Hodding Carter said. They would increase the Russian force in the country by 20,000-25,000 to possibly 85,000 men.

Suggesting the Soviet presence in Afghanistan now amounted to a full scale army of occupation, he said there was "nothing expeditionary" about the numbers of men the Soviet Union was fielding in Afghanistan and the types of military equipment, including MiG 17 and 23 aircraft, there.

Russian troops were replacing units of the Afghan army which had deserted to aid anti-Marxist insurgent tribesmen.

Our foreign staff adds: Heavy

Continued on Back Page



East Europe feels the lack of Iranian oil

BY LESLIE COLITT IN BERLIN

EAST EUROPEAN countries are complaining bitterly about a virtual cut-off in oil supplies from Iran and are looking back nostalgically to the days under the Shah when they could obtain Iranian oil in exchange for East European products.

Officials from several East European countries say they are no longer able to get Iranian oil because the Tehran government is not interested in barter deals for oil.

Poland imported 800,000 tonnes of Iranian oil in 1978 and East Germany was to have started receiving shipments last year in exchange for 1,000 railway cars. But the deal was cancelled by the new Iranian leadership and none of the East Europeans is able to pay the prices now being quoted for Iranian oil.

The shortfall could not have come at a worse time for the Comecon countries as Moscow had told them they can expect only small increases of relatively low-priced Soviet oil over the next five years. East Germany, which last year obtained 18.5m tonnes, or about 90 per cent, of its oil imports from the Soviet Union, will receive only 19m tonnes annually until 1985. East German demand, however, is expected to rise to 24m tonnes by that time.

The East Europeans can buy more than this fixed amount of Soviet oil but only by paying the same price in hard currency which Moscow charges its customers in the West.

Poland has been told it will be allotted 13.1m tonnes of Soviet crude this year compared with 12.7m tonnes in 1979. The small increase, in addition to Soviet petrol and other oil products, will force the Poles to buy more oil from OPEC countries. Poland is expected to meet only 70 per cent of its requirements with Soviet oil, compared with some 76 per cent last year.

Britain supplied 1.3m tonnes of crude to Poland in 1978 and Iraq another 1.1m tonnes. East Germany imported just over 1m tonnes of oil from Iraq and 350,000 tonnes from Syria in exchange for East German products.

The main reason for the Soviet Union's reluctance to raise oil exports to other Comecon countries is that Soviet oil shipments to the West are a leading source of hard currency, bringing in nearly 50 per cent of its convertible currency earnings.

The high price of petrol in Eastern Europe already means that Hungarians, Czechoslovaks, Poles and Romanians have to pay a third of their average weekly income in order to buy 100 litres of super petrol. Bulgarians, if they bought this much, would use up two thirds of their income. East Germans pay 17 per cent of their income for the same amount of petrol and Soviet citizens 13 per cent. West Germans, by contrast, spend only 5 per cent.

Marchais draws closer to Moscow

By Robert Mauthner in Paris

THE FRENCH Communist leader, M. Georges Marchais, left for a one-week visit to Moscow, the first he has paid to the Soviet Union since 1974, amid growing signs that his party is progressively abandoning its recent independent "Eurocommunist" line.

The visit was prepared more than two months ago and, therefore, is not directly linked to the latest events in Afghanistan. But it is clear that the Soviet military intervention in that country has given an added dimension to the talks which M. Marchais will have with Mr. Leonid Brezhnev, the Soviet leader.

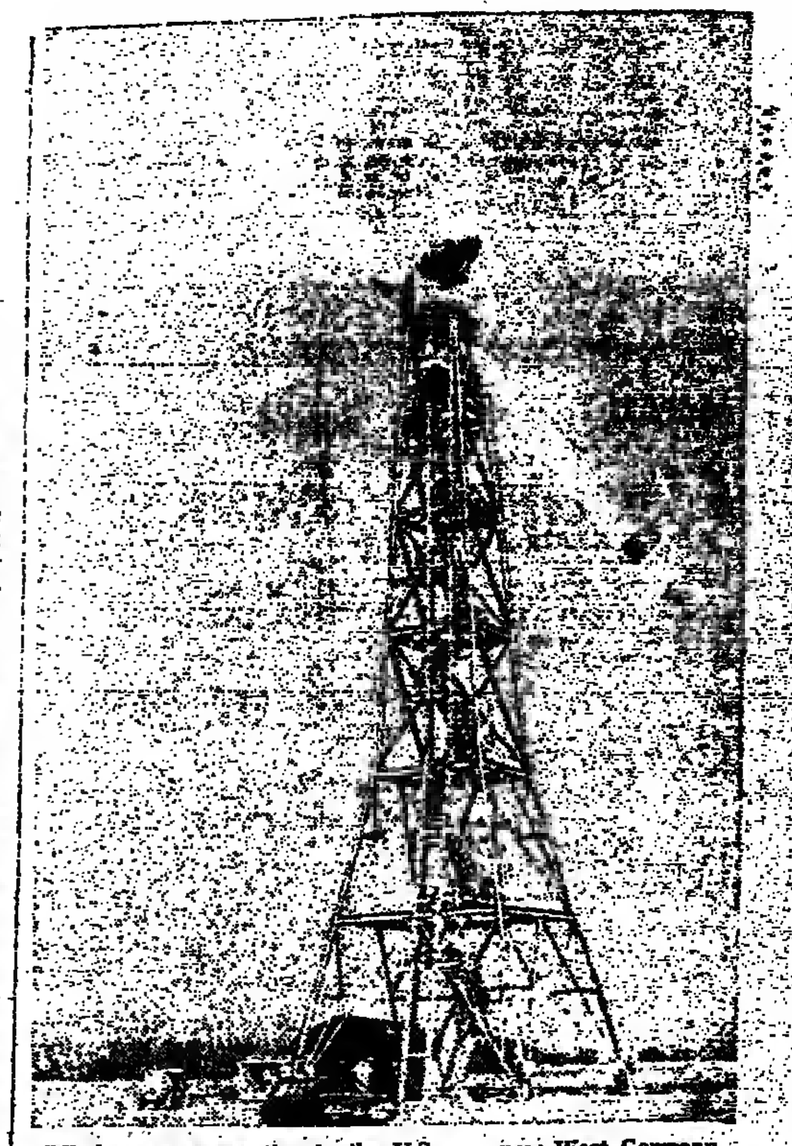
The fact that M. Marchais did not cancel his visit, coupled with a statement last weekend by the political bureau of the French Communist Party, giving qualified support to the Soviet action in Afghanistan, is undoubtedly significant. Once again, France's Communist Party is lagging behind its sister parties in Italy and Spain in condemning the Soviet Union for violating principles which the French Communists loudly proclaimed at their last two party congresses.

The policy disagreements between the French and Italian parties were underlined last Saturday by the absence of any mention of Afghanistan in the joint communiqué issued in Rome after M. Marchais' talks with his Italian opposite number, Sig. Enrico Berlinguer.

While the Italian Communist party has stated that nothing could justify the intervention by a country in the internal affairs of another state and that the Soviet action in Afghanistan threatened world peace, the French party has gone out of its way to justify Moscow's policy.

Though it reaffirmed its adherence to the principle of national sovereignty and the right of all people to decide on their own destiny without outside interference, the French Communists stressed that every country also had the right to ask its allies for help.

The party had "taken into account" the explanation by the Soviet Government that it had answered an appeal for aid from Kabul against a "foreign supported" rebellion, the political bureau's communiqué said.



Wind power generation in the U.S. . . . now West Germany takes an interest.

New threat to Belgian Government

By Giles Merritt in Brussels

BELGIUM WAS last night on the verge of a political crisis that could topple the coalition Government led by M. Wilfried Martens and precipitate a fresh General Election only 13 months after the country last went to the polls.

Following indications that the Front Democratique des Francophones (FDF)—the small but militant party representing Brussels' predominantly French-speaking population—is to pull out of the coalition, the Parti Socialiste was last night considering its own membership of the Government. Although M. Martens could survive the departure of the Front, a Socialist walk-out would mean the collapse of the nine months old 'last chance' Government he formed last spring after protracted negotiations.

The issue is once again that of regionalisation proposals under which not only Dutch-speaking Flanders and Francophone Wallonia would receive self-government powers, but also Brussels itself. The exact status of the Belgian capital, which is largely French-speaking but occupies an enclave of Flanders, is a problem which has brought down successive governments.

The likely defection of the Front from the coalition's rank results from a compromise plan hammered out during week-end talks between Government Ministers and political advisers that would, in effect, shelve the granting of self-government to Brussels while pressing ahead with devolving power to Flanders and Wallonia.

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Strike threatens Irish alumina project

BY STEWART DALBY IN DUBLIN

THE IRISH Government is becoming concerned about the future of the £300m Aughinish Alumina plant in Co. Limerick because of protracted industrial unrest.

Construction work on the plant, which is the largest foreign investment in Ireland in terms of cash, if not in numbers employed, has ground to a halt because of unofficial stoppage last Friday by 20 welders and 26 riggers.

A further 1,000 workers have refused to cross picket lines, meaning that all work had stopped.

The stoppage is the sixteenth in 18 months. At least 2,000 men are normally working on the site.

While attempts were being made yesterday through the agency of an official of the Irish Congress of Trade Unions to sort out the welders' grievance, Mr. Desmond O'Malley, the Minister for Industry, has said he fears there could be another Ferenka.

Two years ago, Ferenka, which was an offshoot of the Dutch company Akzo, closed its factory in the same area because of union disputes. This caused a loss of 1,200 jobs—a large number by Irish standards. It represented 8 per cent of the industrial work force of the area at the time.

Ireland depends heavily on foreign investment for its industrialisation programme.

If completed, the Aughinish plant could employ more than 700 people, add £30m to Irish exports, and, with a prospective output of 800,000 tonnes, give a great boost to the Shannon estuary's plans to become a major port.

The three participating companies financing the building of the plant are Alcan Ireland, which is a subsidiary of Alcan Aluminium of Canada, which has 40 per cent, a subsidiary of Billiton BV of the Netherlands, together with Royal Dutch Shell and a subsidiary of the Anaconda Aluminum Company of the U.S.

So far, IE50m has been spent on the project. Ireland's Industrial Development Authority (IDA) has committed £16.5m to the scheme, one of the agency's largest grant/loan packages, although so far only £3m of this has been spent.

Gaullists make another bid for party unity

BY DAVID WHITE IN PARIS

AS THE FRENCH government prepared to bulldoze a delayed 1980 budget through Parliament, its recalcitrant Gaullist partners moved yesterday to reinforce their own political camp. M. Jacques Chirac, leader of the Gaullist R/PR party, announced the key appointment of a former minister to woo Gaullist splinter groups which have stayed clear of the governing coalition.

The nomination of M. Jean Charbonnel, who is leader of the Federation of Progressive Republicans, the principal group of left-wing Gaullists, was carefully timed just before the start of a special parliamentary session on the budget yesterday afternoon.

M. Chirac clearly hopes that the climate for a reconciliation between his own mainstream Gaullists and the rest will be improved by the show of independence on the part of the RPR in its prolonged budget wrangle with the Government.

M. Charbonnel, a minister of industrial and scientific development under President Pompidou, becomes the RPR's man in charge of worker participation, a theme close to the heart of General de Gaulle and an article of faith for his Left-wing supporters.

He will be responsible for making contacts with Gaullist splinter groups other than his own, which have so far refused to have any truck with M. Chirac's movement because of the latter's involvement in the majority supporting President Giscard d'Estaing.

The RPR earlier made clear it would continue to oppose the 1980 finance bill, which returned to Parliament after the Constitutional Council decided on Christmas Eve that it was null and void.

The RPR's continued campaign for savings in the administration's running costs was expected to lead the Government to "engage its responsibility" on the bill once again to push it through without a vote.

It may have to do this three separate times, on the revenue side of the bill, on the expenses chapter, and on the legislation as a whole. It was because the revenue side was not passed first that the Constitutional Council over-ruled the initial adoption of the bill on December 17.

Spanish union pact may set wage norm

BY ROBERT GRAHAM IN MADRID

SPAIN'S SECOND largest trade union, the Socialist General Workers Union (UGT), has signed a wide ranging two-year wage and work conditions agreement with the National Employers Federation (CEOE). The pact endorses a wage increase of between 13 and 16 per cent for 1980 but the principle of lower rises is accepted for those employed in companies in financial difficulties.

The biggest trades union, the Communist-controlled Confederation of Workers Commissions (CCOO) after a lengthy internal debate refused to join the pact which was signed over the weekend. Its leaders said their objection was to the content of the agreement. But there was a strong element of politics in their action. The confederation has taken the calculated risk of hoping to gain more political capital by not openly "collaborating" with the employers in the pact.

The Confederation controls approximately 45 per cent of total union membership and the General Workers' Union around 30 per cent. In spite of this imbalance employers will now begin negotiating individual wage agreements using the pact as a guideline. In practical terms the Communist Party is unlikely to have the muscle to alter this very much.

Bonn revising views on using wind power

BY KEVIN DONE IN FRANKFURT

THE West German Government is revising its attitude towards wind power, and is hopeful that this energy source could eventually provide as much as 8 per cent of Germany's electricity equivalent to the contribution now made by hydro-electricity.

Bonn has come in for criticism that it has not paid enough attention to wind power, but rising energy costs have persuaded the Federal Ministry for Research and Technology that wind power could well compete commercially with other power sources in the late 1980s and the 1990s.

Construction begins this month on the first full-scale wind-power plant in Germany, at Brunsbüttel, on the North Sea coast near Hamburg.

The costs of the 3 MW windmill are largely being borne by the Federal Government, but three electricity utilities in northern Germany are also taking part. The plant, called "Growian 1," is expected to cost about DM 43m (£11.2m). Of this, the Research and Technology Ministry will probably provide about 95 per cent, with the remaining 5 per cent coming from the utility companies in Hamburg, Schleswig-Holstein and North-Rhineland Westphalia.

The plant will take about three years to build, and the Ministry is then planning a three-year test programme.

In all, more than 40 wind-power projects are being pursued in West Germany, entailing a total research investment of some DM 106m. Herr Volker Hauff, the Federal Research Minister, said the Ministry's new-found optimism for wind power was based on the latest research into the system's technical and commercial viability.

He indicated that wind power could eventually provide up to 8 per cent of West Germany's electricity. Such a target would call for as many as 2,000 3-MW wind power plants. Conventional power stations are normally built to a capacity of about 600 MW.

David Housego, in New Delhi, reviews the problems facing India's new leader

Hopes and fears of Gandhi's big stick

STUMPING THE length and breadth of India for the past four months, often giving over 20 speeches a day, Mrs. Indira Gandhi has had no time to consider the policies she would follow if returned to power.

Before the results were known, she was telling friends that she would prefer to sit out the next few months in opposition rather than enter a coalition government that would inevitably become unpopular in tackling the difficult problems of the months ahead of high inflation and deepening recession.

The size of her majority reflects the appeal to a fearful and uncertain nation of a woman widely regarded as "Mataji" (Mother), whom they hope will lull their apprehensions by using authoritarian measures, if necessary. In the long run, the expectations aroused by her victory are likely to be as difficult to fulfil as the populist slogan of "Garibi hatao" (Remove poverty), with which she swept back to power in 1971. Those with their doubts about Mrs. Gandhi would seem to have stayed away from the poll, thus producing the lowest turnout in more than 20 years.

But for the immediate future, the size of her victory—in every sense a personal triumph—will help solva the problem of restoring law and order, which, she says, is her priority.

The withdrawal of the "Emergency" after her defeat in 1977 brought an immediate release of tensions that resulted in an outbreak of strikes and caste and communal violence. With the Government increasingly ineffective over the past two years, freedom has turned to disorder, reflected in the rising trend of robberies and murders in the towns and countryside, and shortages of sugar, diesel, kerosene and raw materials for industry as a thriving black market has developed to exploit bottlenecks in supply.

Law and order

Power blackouts, particularly in northern India and Calcutta, where power stations are working at 45 per cent of capacity, increasing labour agitation and communal riots are further symptoms of disorder.

The situation has been exacerbated in recent months as gangs of Congress party thugs have deliberately provoked disturbances to improve Mrs. Gandhi's chances. But now the very fear of what Mrs. Gandhi could do is likely to curtail violence and bring a sharp improvement in law and order that will redound to her immediate credit. That the lady is there will be discipline in itself.

The police, however, come under the authority of the various state governments, and not of the federal authority in Delhi. Before the election, the only state government controlled by Mrs. Gandhi's Congress Party was Orissa. For this reason alone Mrs. Gandhi will be anxious to follow up her victory by re-establishing her dominance in the states as well as over the federal Government.

Besides, her vision of a united centralised India does not encompass the devolution of power to the states encouraged by the Janata party. She will want them on a tighter rein.

Mrs. Gandhi's real difficulties are likely to begin in the spring, when the shock of her return will be wearing off and the impact of the drought in northern India will be reflected in a dismal harvest, pushing food prices higher.

Faced in 1974-75 with similar economic problems of high inflation, Mrs. Gandhi imposed a tough stabilisation programme that included cutbacks in public sector expenditure, a halt to bonuses and cost of living increments and a highly restrictive monetary policy.

With inflation now at 20 per cent, many government officials would favour such a package again. Mrs. Gandhi's instincts may be in the same direction—even though the cost could be a repetition of the labour troubles that paved the way for the emergency—because prices did fall in 1975-76, and she has been elected to bring prices down. But they fell less because of the stabilisation programme than because of a sharp rise in food production after a good monsoon.

Budget deficit

The rate of price increases now is likely to level off as speculators shy away from further risks and there is less disruption to the flow of goods. But those in favour of stabilisation measures put much of the blame for the present inflation rate on the size of the budget deficit and a rate of monetary expansion that in India has reached the unprecedented level of 18 per cent above last year.

In fact, both reasons are likely to be marginal besides the externally generated inflation affecting industry through higher import prices (above all oil) and the impact of a bad harvest. The decisive influence on prices this year will be whether or not there is a good monsoon.

The risk of cutting back on public sector outlays and imposing tighter monetary and fiscal controls is that such measures would hold back a much needed expansion of infrastructure investment and halt in its tracks the momentum of private investment that has been building up in response to the higher level of demand in the economy generated from recent higher levels of food output.

Such measures would inevitably deepen the recession further. But with food stocks and foreign exchange reserves still high, Mrs. Gandhi inherits a healthy economy. It is an economy, however, with serious problems of bottlenecks in the transport, coal and power sectors that require efficient management. It is also one that has hanging over it the threat of another bad monsoon, in which case, no stabilisation programme will arrest the rise in prices.

In India the focus of interest in the coming days will be on her choice of advisers and of Cabinet ministers. The new batch of Congress deputies entering Parliament were chosen mainly on the basis of their loyalty and subservience to Mrs. Gandhi or her son Sanjay. There are few promising candidates for senior posts among them.

Supporters engulf Mrs. Gandhi as news of her election victory comes in.

Without much doubt, Sanjay will be her most influential adviser. Still only 33, it was he who pressed his mother into declaring an Emergency in 1975 and then, without any official position in the Government, took the lead in pushing forward the simplistic programmes of forced sterilisation and slum clearance that helped lose Mrs. Gandhi the 1977 election.

She stood by him resolutely since, linking her own defence against judicial charges with protecting him against far more serious criminal allegations.

While advancing his political career and pushing forward pet social projects, he and his associates encouraged links with the business community that, during the Emergency, gave Mrs. Gandhi's government a corrupt image. The concentration of power during the Emergency, coming on top of the enhanced status that Mrs. Gandhi had earlier given the Prime Minister's secretariat, encouraged impressions of her administration as a court in which Sanjay played the role of Dauphin and which had dubious links to the underworld of Delhi and Calcutta.

Mrs. Gandhi is said to be considering a more open system of administration through committees. But one area she will want to keep under firm control will be foreign affairs. Her anti-Americanism and her belief that the CIA are against her is deep-rooted. It remains to be seen how far this will carry her towards Moscow at a time when her commitment to non-alignment has been challenged by the Soviet invasion of Afghanistan.

Rhodesia: impartiality of British exercise called increasingly into doubt

BY QUENTIN PEEL

AGAINST ALL the odds, the Lancaster House agreement on Rhodesia appears to be on course. In spite of dire warnings that the guerrillas would not respond to the ceasefire call within the seven days allowed, if at all, some 18,500 members of the Patriotic Front alliance had reported to assembly points within hours of last Friday's deadline.

Two major questions now face Lord Soames, the British Governor installed in the former rebel colony: will the ceasefire hold, and can he promote elections which are seen to be free and fair in the wake of a bitter seven-year war?

The ceasefire is already under pressure. The Rhodesian security forces claim that thousands of guerrillas have stayed away from the assembly places, using their "mujibhas" — teenaged sympathisers — to take their places. They also maintain that there is a wave of lawlessness caused by guerrilla bands still roaming the country.

The Patriotic Front, for its part, accuses the security forces of breaching the ceasefire, by deploying the notorious security force auxilliaries throughout the areas vacated by the guerrillas. These are rudimentarily trained men originally recruited by Bishop Abel Muzorewa, the outgoing Prime Minister, as his "private army." Front officials say the auxilliaries are responsible for much of the lawlessness and intimidation.

Lord Soames has laid himself open to accusations of partiality by responding more readily to the claims of the security forces than those of the guerrillas. His decision, taken in secret "recently" and only announced on Sunday night, to deploy Rhodesian security forces in support of the police, has raised a major storm.

It has been interpreted here as giving back to the security forces virtually all the freedom of movement they were forced to abdicate at the start of the ceasefire, while the guerrillas are supposed to remain in their assembly places.

Indeed, the whole British exercise is meeting growing criticism here that it is deliberately favouring the outgoing Government of Bishop Muzorewa and his security forces at the expense of the political wings of the Patriotic Front: Mr. Robert Mugabe's Zimbabwe African National Union (ZANU), and Mr. Joshua Nkomo's Zimbabwe African People's Union (ZAPU).

The biggest danger to the visible impartiality of the British exercise lies in its adoption of the entire machinery of the Rhodesian Government, with only a skeleton staff under Lord Soames to monitor it. That machinery, both civil service and police, is deeply committed to the retention of the status quo and therefore to the promotion of Bishop Muzorewa's United African National Council (UANC).

Both the police and the Ministry of Home Affairs responsible for the administration of all the black areas, have effectively been part of the security forces in fighting the guerrilla war.

Now they are expected to be impartial servants of Lord Soames in promoting free and fair elections. The District Commissioners and their District Assistants will play an important role running polling stations, while the police maintain law and order.

The actual mechanics of the election will be the most closely supervised area, although again it is the Rhodesian authorities and not the governor's staff who will organise it.

As for the delicate question of monitoring the armed forces' activities, the Commonwealth monitoring force seems to be watching the Rhodesian forces much less closely than the guerrillas. Whereas the guerrillas are in 16 well defined assembly places, each assigned a 17-man team of Commonwealth troops, the Rhodesian side of the operation is much more thinly stretched.

It is not at all clear that the auxiliaries are being systematically monitored. And for the Rhodesian army there are 45 two-man teams to monitor what is believed to be over 100 company bases. It is up to the monitoring force colonel based in each of the five commands of Rhodesian Joint Operations to decide how to allocate his teams. Otherwise, the monitoring force relies on being kept informed of operations by the Rhodesian command.

Even in more specific areas affecting the elections, Lord Soames' rule is accused of being less than free and fair. He has forced the Patriotic Front parties to delay the start of their election campaigning, first by refusing to lift the ban on them until they had signed the Lancaster House agreement and then by asking Mr. Nkomo and Mr. Mugabe to put off their return. Bishop Muzorewa and the other internal party leaders have already launched their campaigns.

The Governor has declined to set any limit to party political financing for the election, arguing that it is impossible for his skeleton staff to control it if they wanted to. But again, this decision almost certainly benefits the UANC the most, and probably Mr. Nkomo's ZAPU as well, at the expense of the other parties, who are less likely to attract heavy foreign financing.

Both the Rhodesian Press, and the government broadcasting service, are heavily biased in favour of the bishop. Although the Zimbabwe Rhodesian broadcasting service has been told to stop using the word terrorist, its news selection remains highly selective. On the day of the ceasefire deadline, the only man interviewed was Bishop Muzorewa, who accused the Patriotic Front of breaking the ceasefire, but there was no response by the Front.

The other area where there is an imbalance between the parties, caused in part by the late organisation of ZANU and ZAPU, is in transporation. This is likely to be crucial in an election campaign held during the wettest month of Rhodesia's rainy season. The UANC has managed to hire a very large proportion of the private buses available—some 800 according to party organisers—which has even hindered the Commonwealth monitoring force moving guerrillas from their rendezvous points to assembly areas.

British officials have stressed that the elections must be seen to be free and fair. However, the Governor appears oblivious to much of the criticism, relying heavily instead on the advice of the existing Rhodesian administration.

Nevertheless, he does have important forces working in his favour, whatever the impartiality of the exercise. Most important is the continuing commitment to the settlement of the front-line African states. Now that most of Rhodesia's borders are being re-opened, the neighbouring states of Zambia and Mozambique in particular will be extremely loth to support the Front in backing out.

On the other side, South Africa, in spite of belligerent talk, is equally unwilling to intervene in what could be an unwinnable guerrilla war. All sides have a very real interest in a solution.

Iranians admit industry hurt by shortages and investment lack

BY SIMON HENDERSON IN TEHRAN

A FRANK admission of the poor state of Iranian industry following last year's revolution has emerged in two lengthy newspaper articles in Persian-language newspapers.

Official spokesmen usually answer criticism of the economy with assertions that conditions are improving rapidly, and that Iran can manage without foreign experts or investment. But the newspaper articles give a different picture.

One article in the daily Islamic Republic, the organ of the hardline, pro-Khomeini clergy, reports on the findings of a government mission to Saveh, a development town about 50 miles south-west of Tehran.

It says industries there have suffered since the revolution from strikes, go-slows, financial problems, shortages of raw materials, and interference in management by revolutionary councils. The most important problem, it says, is uncertainty, which has resulted in investment drying up.

The other article, in the daily Ettelaat, a more independent paper, reports that a crisis has gripped Iran's light and heavy industries. Production has declined considerably in many industries, and, in some cases, has stopped completely.

Interviews with three managers of car-manufacturing companies and two managers of steel mills show the seriousness of the problem. The newspaper warns that the more widespread effects of this on industry a probable reference to the political consequences of unemployment will certainly appear, thus threatening the revolution.

The head of the company selling Japanese Mazda cars says production is running at 80 per cent of pre-revolution capacity, after ceasing completely. However, this is less than half the theoretical full production. The decline in production was due to the shortage of imported parts, but an arrangement has now been made for supplies.

The cost price of each car is higher than its selling price and the manager says the company is unable to meet its banking commitments.

The manager of the SAIPA car company, which produces the French Citroen Dyane and Renault, says 40 per cent of his 2,500 workers have been laid off. The cars are being sold at 1978 prices, but there will be a price increase soon to meet the higher cost of materials and wages.

He told the newspaper that some workers in the plant ("associates of the former régime") wanted to hinder assembly. The manager has obviously been assigned to his post since the revolution, for he says the factories had been set up by the Shah's régime merely for the benefit of imperialists. What Iran wants is a car industry independent of foreign countries.

Mazda's problem with imported parts is also a problem for SAIPA and Iran National, which assembles Hillman Hunter cars from Talbot of Britain and Mercedes buses and trucks. Recent deliveries of Hunter kits, after the three-month strike in Talbot's West Bromwich factory, should lead to production rising from the present 220 cars a day towards the previous levels of 500 a day.

Several companies in Saveh are intended to produce car parts, but supplies of these are also disrupted. The Saveh spring-manufacturing factory, intended to produce suspensions, is idle, with only six employees instead of 300.

The Imperial Paint Company, producing car paint, had all its machinery destroyed in a fire. The Pars Tyre Company, whose shareholders include Dunlop and Pirelli, has been idle for months. The management having disappeared. The Iran Tyre Remoulding Company is also at a standstill because of lack of investment.

A common problem, which also explains the shortages of component parts and raw materials, is the unsettled labour force. Unemployment is admitted by Government officials to be running at about 30 per cent, or 3m people. But there are also lay-offs, with factories having to pay wages to all their workers.

Eloquent testimony on labour problems was given by the managing director of Iran Steel Industries. Contract workers in Ahwaz, the south-western oilfield town which is also an industrial centre, have been demanding more wages, but when it is raining or cold they do not go to work. "We are helpless in dealing with a workforce of 4,000 workers," he said.

Soviet invasion poses a threat to the Islamic world

BY ALAIN CASS IN ISLAMABAD

WHEN THE Soviet Union flew its troops into Afghanistan at Christmas, blatantly violating the spirit of detente as the United States understood it, the intervention provoked two separate sets of chain reactions.

The first resulted in a crisis between the United States and the Soviet Union. The effects have been immediate, tangible and quantifiable. The second set of events may be less visible but, ultimately, could prove devastating. They flow from the mere presence of a Soviet occupying force in the heart of an area which is both volatile and of vital strategic importance to the industrialised world.

The Soviet takeover of Afghanistan — thinly populated country roughly the size of France — appears to threaten the oil-bearing regions of the Gulf and the sub-continent inasmuch as Iran and Pakistan lie in the path of a putative Russian advance.

The Islamic world is convinced that Afghanistan is the first of many dominoes to fall in a Soviet drive for direct access to the warm waters of the Indian Ocean (for its southern hemisphere fleets) and for control of the Gulf oilfields (in anticipation of the time when its own wells run dry).

This remains to be seen. In an era of ballistic missiles a warm water port seems of less strategic value than in times past. Moreover, the U.S. has made it clear that it will intervene militarily to defend the oil vital to the economies of the West and Japan.

The consequences of such a clash—as the Russians have presumably assessed—are incalculable and therefore unthinkable. The threat of covert subversion, however, both against Iran and Pakistan, is more difficult to guard against.

The key to instability in the region is the vast nomadic tribes which straddle existing political boundaries. Without exception they are, in varying degrees, nationalistic, xenophobic and resentful of central authority. But whether they be Kurds in the Turkey-Iraq-Iran nexus, Turkish-speaking Aberbaijanis in western Iran and the southern USSR, Baluchis in Pakistan, Afghanistan and Iran or Pushtuns on the Pakistan-Afghanistan border, they are all vulnerable to outside influences.

Iran is already threatened by armed secessionist groups, some of which are backed by outside powers. If it chose to, the Soviet Union could foment trouble in the tribal belt which runs along the border with Afghanistan, exploiting the political vacuum which now exists.

The conventional wisdom has been that the Russians had an interest in a stable, if hostile, Iran on their southern flank. Now the gains to the Soviet Union from an uprising against Ayatollah Khomeini seem undeniable.

The problem for the West, and for the U.S. in particular, is that the Khomeini regime is as hostile to Western interests as it is to the Kremlin. Any scope for bolstering Iran against the Soviet threat is therefore severely curtailed, especially while the U.S. hostages are held in Tehran. Even if they were released, the prospect of wiping the slate clean and forging an alliance between the West and the radical Moslem world is improbable in the present climate of Islamic revivalism.

For precisely the same reason the U.S. may find it difficult to entice Pakistan back into the fold, however frightened and isolated that country now feels with Russian tanks less than 50 miles from its borders.

If anything the tribal threat to Pakistan is greater than that to Iran. The so-called Durand line defining the border between

Mr. Babrak Karmal: revived Afghan claims to vast areas of Pakistan in his first speech.

Pakistan and Afghanistan has long been disputed by Afghanistan, which still lays claim to vast areas of Pakistan, as far as the Indus river. Mr. Babrak Karmal, the new Afghan leader, revived these claims in his first speech referring to the "legitimate aspirations" of the Pushtun and Baluchi peoples.

The tribal areas which stretch along the border up to 30 miles into Pakistan are separately administered and defended by the Pakistan Government. These and the Pushtun-dominated North-West Frontier province and the strategic southern province of Baluchistan, are all alive with issues wide open to exploitation by the Russians.

There are even fears that the Soviet Union may claim the right of "hot pursuit" into these areas, which are being used by the Afghan rebels as training areas and sanctuary. Given the boundary dispute, assurances that the U.S. would stand by its bilateral defence treaty with Pakistan—an executive agreement not ratified by Congress—in the event of outside attack sound hollow in Islamabad.

President Zia-ul Haq, Pakistan's military ruler, has other problems to contend with. His country is facing severe economic difficulties, and the burden of feeding and housing swelling numbers of Afghan refugees could prove intolerable. The cost of keeping the present total of 400,000 is $160,000; if the total rises to 1m, as some say could occur by the spring, the meagre handout of four rupees a day would cost Pakistan a crippling $2.8m a week unless extra international assistance became available.

Pakistan's debt burden of $7-8bn and high debt service ratio is relieved by a recent agreement with the IMF for $150m of credits and by some $200m in loans from the Saudis. But on the domestic front the budget deficit this year is likely to top $600m and the government will inevitably have to print money to cover the shortfall. With inflation now running at between 18 and 25 per cent, a further rise will add to the regime's intense unpopularity.

The Pakistanis see themselves sandwiched in between a Russian satellite to the west and India to the east. They point to the deepening military commitment of the Russians to India despite a more even-handed political approach in Delhi, and will see still more reason to worry in Mrs. Gandhi's election performance. India has a vast arsenal of weapons made or about to be made under licence from the USSR, including MiG 21, 23 and 25 aircraft, booster rockets, reconaissance satellites, ships, tanks and an entire military support programme.

The Pakistanis are bitterly critical of the Americans, whom they regard as fair-weather friends. Relations between Washington and Islamabad have been going steadily downhill since the first Indo-Pakistan war, but hit a new low when Congress imposed an arms and aid embargo in an effort to pressure Pakistan into suspending its nuclear programme.

President Carter has said he will authorise the resumption of arms deliveries to Pakistan, presumably after Congressional consultation. In normal circumstances President Zia-ul Haq might leap at the opportunity, and may still do so after a suitable period of public haggling if the package is big enough and the terms are right — Pakistan might face problems over purchases for cash.

Politically, too, there are difficulties. American credibility in the region is seriously questioned, and President Zia, like many of his Islamic colleagues, have to weigh up carefully the advantages of what is bound to be a limited military package against the high risks of being seen to fall in line with the U.S. The possibility that he may adopt a neutral stand and formally ally himself with the Moslem and the Third World cannot be excluded.

President Carter, on the other hand, will have to decide just how far he can go in giving Pakistan the sort of qualitative military boost it is seeking since India would undoubtedly regard this as a threat to its own security and this, in turn, might set off a chain of events which could be hard to contain.

Pressure on Spain to join NATO

By Robert Graham in Madrid

THE SOVIET invasion of Afghanistan has increased the pressure on the Spanish government to decide on NATO membership. Events in Afghanistan have also clouded the prospect for the European security conference, whose follow-up is due to be held in Madrid in November.

NATO membership is linked with the next phase of the security conference in Spain. Over the past year, NATO members have been urging Spain to join the alliance. The Government has refused to commit itself even though adherence to the alliance is part of the olicy of the ruling Union de Centro Democratico. The strongest hint came last month when Sr. Adolfo Suarez, the Prime Minister, visited Brussels and praised the NATO decision on missile armaments.

The main argument against an early decision has been that it would be an unhelpful gesture to the security conference while Spain was the host. In other words, nothing could be done until the conference was over.

During the present East-West tension, this argument carries less weight.

At one stage this year, regardless of the conference, the Government will have to decide on its external defence arrangements. The defence treaty with the U.S. expires in 1981, and the Americans have made no secret of their belief that NATO membership is the logical solution.

Grain market may be closed to the Russians

BY JOHN EDWARDS, COMMODITIES EDITOR

SOVIET CLAIMS that it will be able to obtain grain from other sources, apart from the U.S., do not seem justified by the facts.

In the wheat market, five major exporting areas — the U.S., Argentina, Australia, Canada, and the EEC—accounted for 64.2m tonnes out of total world trade of 71.2m tonnes. The Soviet Union itself, with 2.5m tonnes, and other countries — Sweden, Turkey, Hungary, Romania and Bulgaria —accounted for the remaining 7m tonnes.

In 1979-80, the other countries, apart from the big five, are expected to export only 5m tonnes (including 1m tonnes by the Soviet Union), out of a record world trade of 77m tonnes.

In the coarse grains (maize and other feedgrains), the market in 1978-79 world trade totalled 89.7m tonnes. Of this, the U.S. accounted for 57.1m tonnes. The remaining 32.6m tonnes was shared between Argentina 11.5m, West Europe 6.3m, Canada 3.9m (mainly barley), South Africa 3m, Australia 2.6m, Thailand 2.2m, other countries 2.2m, and the Soviet Union 1m tonnes.

This season (1979-80) the U.S. share of world coarse grain exports is expected to rise to 71.2m out of a total trade of 101.0m tonnes. Argentina's sales are forecast to fall to 9.6m tonnes, helping reduce the non-U.S. exports to 29.8m tonnes.

The five leading wheat exporting countries are due to attend an emergency meeting called by the U.S. on Saturday to seek support for its suspension of sales to the Soviet Union. So far, only Argentina, which has a reduced crop this season, has indicated that it will fulfil its wheat sale commitment of 1m tonnes to the Soviet Union.

Unless the Soviet Union can persuade Australia, Canada or the EEC to ignore the embargo, there are no other major sources of supply. All it could hope to do is pick up small quantities from other areas, like Thailand, South Africa and possibly via its Eastern European allies—most of whom have suffered poor harvests, causing them to step up imports. However, once again, the U.S. will be the main supplier to these countries, and it will no doubt urge other suppliers to restrict exports to these countries to normal levels.

The U.S. has emphasised that the present suspension of grain sales is different from previous embargoes during the Ford and Nixon Administrations, which were heavily criticised by customers in the Western world. The cutback in soyabean exports in 1975, because of a shortfall in the U.S. crop, caused such resentment, that the U.S. Administration at the time said it would never cut sales again in this way.

WORLD COARSE GRAINS EXPORTS
(million tonens)

Source	1978/79	1979/80 (est.)
Argentina	11.5	9.6
West Europe	6.3	5.6
Canada	3.9	4.3
South Africa	3.0	2.3
Thailand	2.2	2.3
USSR	1.0	0.0
Others	2.2	2.3
U.S.	57.1	71.2
World total	89.7	101.0

WORLD WHEAT EXPORTS
(million tonens)

Source	1979/79	1979/80 (est.)
Argentina	3.3	3.5
Australia	7.2	11.5
Canada	13.5	14.0
EEC	7.8	7.0
U.S.	32.4	36.0
Total	64.2	72.0
USSR	2.5	1.0
Others	4.5	4.0
World total	71.2	77.0

Bonn looks for EEC initiative

By Jonathan Carr in Bonn

IN THE wake of the Soviet intervention in Afghanistan, West Germany is pressing for a European Community initiative to support the independence of other states in the Middle East.

Herr Hans Dietrich Genscher, Foreign Minister, underlined at the weekend that with its latest military action the Kremlin had again shown it was not the natural ally of countries outside the Soviet bloc.

The Europeans now had to demonstrate, with economic aid and political co-operation, that they respected the non-aligned status of Middle East states and were ready actively to support it.

Herr Genscher drew a parallel with European aid for the Association of South-East Asian Nations members who had formed the alliance to resist threats to their independence.

Similar ideas are likely to be broached by Count Otto Lambsdorff, Economics Minister, in talks in Saudi Arabia and several other Gulf states this week.

Bonn also fears the Soviet intervention may have harmed West German efforts to promote detente with Eastern Europe — not least with East Germany.

A question mark now hangs over the planned meeting between Chancellor Helmut Schmidt and Mr. Brezhnev, the Soviet President.

Italy reopens debate on communists

BY PAUL BETTS IN ROME

THE Afghanistan crisis is having major political repercussions in Italy, rekindling the debate on the participation of the Italian Communist Party—the largest Communist party in the West—in Government.

This comes at a particularly delicate moment for Italy, coinciding with growing demands for an emergency all-party governing coalition to tackle the increasing economic and social difficulties.

Such a coalition, which could entail the presence of Communists or independents in the Communist Party lists in government, would replace Sig. Francesco Cossiga's minority Government, which has faced a battery of criticism from the left-wing parties and the unions in past weeks.

The Communists' condemnation at the weekend of the Soviet invasion has been regarded by several left-wing forces here, including the left of the Socialist Party, as a significant confirmation of the Communists independence from

"The Communist Party's condemnation is in marked contrast with the attempts of the French Communists to justify the invasion. Talks between Sig. Enrico Berlinguer, the Communist Secretary-General, and M. Georges Marchais, the French Communist leader in Rome at the weekend, seemingly failed to help resolve their differences.

Moscow and its readiness to enter government.

Japan's response muted by economic ties

BY RICHARD C. HANSON IN TOKYO

THE SOVIET invasion of Afghanistan will mean a further setback for efforts to normalise Moscow's diplomatic relations with Japan. Japan feels, however, economic ties with the USSR are too vital to justify other "concrete" actions which could damage those relations.

The Japanese reponse to the Soviet moves has been much stronger than the reaction to the Iranian situation, where the U.S. felt compelled to criticise Japan for being "insensitive." However, as is the case in Iran, Japanese diplomats now consider their options limited.

Japan is already committed to co-operate with the Soviets in three major resource development projects in Siberia with talks on four others presently at a standstill. Over $150m in financing has been extended by Japan so far, and the Soviets reportedly would like over $1bn in Japanese aid. Japan will benefit from the availability of Soviet resources, such as timber and natural gas.

The Soviet military action could complicate future negotiations, but it is unlikely that Japan will pull out of deals already agreed just to teach the Soviets a diplomatic lesson.

Reuter adds from Peking: Mr. Harold Brown, the U.S. Defence Secretary, has told Chinese Defence Officials that any country threatening the shared interests of the U.S. and China could face complementary military and diplomatic action. The U.S. had begun to realise the benefits of contacts between the defence establishments of the two countries, he said.

Yugoslav media outcry

BY PAUL LENDVAI IN VIENNA

YUGOSLAVIA'S MEDIA has sharply attacked the Soviet invasion which the Belgrade Politika called a "danger to world peace." The newspaper Borba also sharply attacked the Soviet action.

The Yugoslav Press has stressed that this was the first time that Soviet troops had intervened in a country which is not an official member of the so-called "socialist community" and spoke out for a non-aligned policy. The media has also extensively reported the worldwide condemnation of the Soviet action.

While East German and other East bloc journalists are reporting from Kabul, the special correspondent of the Belgrade Politika was turned back from Kabul airport along with Western newsmen.

Yugoslavia's leaders have not publicly condemned the Soviets, but a joint statement issued yesterday by the Yugoslav and Iraqi Foreign Ministers called for a withdrawal of foreign troops from Afghanistan and Cambodia—without mentioning the Soviet Union or Vietnam by name.

Venezuela reduces supplies to major oil companies

BY KIM FUAD IN CARACAS

VENEZUELA IS cutting its supplies to major international oil companies in 1980 under sales agreements to be formalised in the near future.

This reflects, in part, the smaller total exports available, down from an average of over 2m barrels a day in 1979 to 1.8m b/d this year. The majors will receive less than half of the volume projected for 1980 and have also been forced to accept tougher terms, quite apart from higher basic prices.

Hardest hit by the cutback is Exxon which reportedly saw its 600,000 b/d level last year reduced to a little over 400,000 b/d in 1980. Shell's level is believed to have been reduced from some 350,000 b/d to less than 300,000 b/d.

Exxon, Shell and other companies which operated in Venezuela until the 1976 nationalisation of their properties have since purchased the bulk of the South American producer's oil exports under renewable two-year contracts. This year, Venezuela took advantage of the expiration of virtually all its sales contracts at the end of 1979 to make major changes in volumes, prices and other items.

In tough negotiations concluded before Christmas, most of the companies signed letters of intent accepting Venezuelan demands, including substantial reduction in fees of about $150m per year paid to the companies by the state oil industry for technical assistance.

In the new one-year sales agreements, the companies are allowed much less flexibility in lifting volumes of oil and absorbing price changes. They must pay in 30 days and their purchases of Venezuela's scarce light and medium crudes — about a third of total exports—are linked to lifting larger volumes of less valuable and harder-to-sell heavy crudes.

Venezuela had also demanded that the companies certify the final destination of the crude they buy from Venezuela in order to avoid having the oil, purchased at an average $23 per barrel, resold on the spot market.

This demand was hotly contested by the companies which insist that they sell no oil on spot markets. As a result, a modified version of the original demand was finally agreed.

The new terms for crude sales to major international companies reflect Venezuelan policy goals of selling directly to end-users rather than going through company channels. Additionally, Venezuela has committed itself to Government-to-Government negotiated supply agreements.

This year it will provide Central American and Caribbean nations with over 140,000 b/d under preferential terms. It has also agreed to supply Italy with 70,000 b/d.

Wall Street Journal to expand

By Stewart Fleming in New York

The Wall Street Journal, the leading daily U.S. business newspaper, is planning a major expansion of several of its operations in the current year, according to Mr. Warren H. Phillips, the chairman and chief executive of Dow Jones and Co. which publishes the Journal.

In a letter to readers in yesterday's issue, Mr. Phillips discloses that the Journal will shortly increase by around 10 per cent the space in the paper devoted to news.

At the same time it will increase its foreign news coverage to reflect the increasing impact of events overseas on American lives and American business. Towards the end of the year or in early 1981 there will also be an expansion of editorial opinion coverage.

The Journal, which lays claim now to being the nation's largest newspaper in circulation, is also planning to open new printing plants near Chicago and Sharon, Pennsylvania. In the 1970s the paper became the first to use space satellites to transmit news to overseas editions.

Iran boycott plan

AMERICAN labour leaders yesterday launched an attempt to organise a worldwide boycott against co-operating in trade with Iran, Ian Hargreaves writes from New York. Five officials from transport unions in the U.S. and Canada sent a cable to the London-based International Transport Workers' Federation calling for an emergency meeting of the federation's executive to plan anti-Iranian action.

'Deliberate policy' pushes Brazil's inflation to 77%

BY DIANA SMITH IN BRASILIA

BRAZIL'S inflation soared to 77.2 per cent in 1979 — the highest rate in the past 25 years excluding 1964, when the figure was 91.9 per cent.

The wholesale price index rose 80.1 per cent during the year, with an 8.6 increase in December. Overall inflation in December was 7.6 per cent.

According to the Getulio Vargas foundation, which published the final 1979 figures yesterday, the upsurge of inflation last year was largely due to "a deliberate Government policy of realigning prices that were out of step. 1979 was the year of the paradox of corrective inflation—that is, greater increases in the present for the sake of more moderate increases in future."

Sr Delfim Netto, the planning Minister, told the Brasilia press that the major corrections were in prices of oil derivatives, grain and meat, electricity and in foreign exchange rates.

Although these corrections must continue in 1980, Sr. Netto said, they would be less frequent and less intense. This week the authorities refused requests for immediate increases in the price of flour, meat, milk and hotel accommodation. Furthermore, after "wildcat" mark-ups of as much as 45 per cent in goods and services following the 30 per cent devaluation of the cruzeiro on December 7, tax inspectors are examining the books of traders and providers of services. Four hundred inspectors have been detailed for this operation, checking prices charged on December 5 and December 14, then auditing the boks of culprits.

Sr. Netto hoped that inflation could be reduced in 1980, through less frequent price increases and lower public spending. The budgets of large state concerns have been placed under tight scrutiny by his department, and all ministries have been requested to cut spending. But the spectre of sharply higher oil prices looms large over whatever official efforts may be made.

● The sudden death of Sr. Petronio Portella, 54, on Sunday could impair Brazil's progress towards political liberalisation.

Sr. Portella was a senator from Piaui state until 1978 and Minister of Justice in the administration of President Jeao Figueiredo. He was also the undisputed coordinator and pacifier in the difficult negotiations between the Presidency and Congress that led to abolition of arbitrary presidential powers first instituted in 1964, amnesty for 5,000 citizens punished under these powers, extinction of the two artificial pro- and anti-government political blocs, and the formation of multiple parties.

U.S. BUDGET

Carter to boost housing

BY DAVID BUCHAN IN WASHINGTON

PRESIDENT Jimmy Carter has decided to curb benefits for the long-term unemployed in the coming year, a move that is likely to anger trade unions, and to put the money into subsidising more housing for low-income families, a boost for the sagging construction sector.

The shift is part of the Administration's juggling act, preparatory to the unveiling at the end of this month of the new 1980-81 federal budget. The White House evidently wants to offend as few interest groups as possible in this election year, despite the obvious difficulty of reconciling its twin goals of increased defence spending and a smaller budget deficit.

As things stand at present, the new budget, to be announced on January 28, will propose spending of $616bn with a deficit of around $15bn, half the shortfall in the current fiscal year.

But trade union leaders, whose relations with the White House have improved markedly

President Carter . . . cuts in unemployment benefit

in recent months, may well take against the new restrictions in jobless benefits, particularly when the Administration itself is forecasting a rise in the unemployment rate over the year to 7.5 per cent, compared with the 5.8 per cent of last November.

The AFL-CIO trade union federation explicitly based its co-operation with the Carter Administration, enshrined in the loosely worded "social contract" agreement of last October, on adequate measures to deal with rising unemployment. A mild economic recession has been widely forecast.

The Administration's move tightens the formulae under which those without jobs can receive an extra 13 weeks benefit in addition to the normal 26 weeks. Mr. Carter's budget planners believe this could save the Government between $400m and $800m in the 1980-81 fiscal year. This, the planners reckon, will allow the Administration to subsidise an extra 300,000 housing units

El Salvador party elects candidates for junta

SAN SALVADOR — The Christian Democratic party agreed on Sunday to form a new government with the military if its conditions were met. The party is demanding a transformation of the security forces, a dialogue with leftist groups and the exclusion of private enterprise representatives from the Government.

The Christian Democrats, the largest official opposition party, elected two candidates for any new military-civilian junta in a national convention held at the weekend. One, Sr. Hector Dada Hirezi, was Foreign Minister in the previous Government which collapsed last week.

There was no indication if the military would accept the Christian Democrat demands. Two military junta members met on Sunday with the Permanent Council of the armed forces, a group of young colonels who led the overthrow of Gen. Carlos Humberto Romero last October.

Most of the political parties in the previous Government have said they will not join any new Government. A third junta member will also have to be selected to weight the junta in favour of the civilian sector. But there was no indication who the candidate might be.

Archbishop Oscar Arnulfo Romero said at the weekend that the Government was moving to the right. There had been many incidents of repression, illegal arrests and disappearances in the last few weeks. He praised the resignations of the junta members and the Minister and said it showed "they were honest men."

About 300 people marched in a funeral procession for a young woman killed in a guerrilla attack on National Guard headquarters last Friday. The woman was believed to be a member of the Popular Liberation Forces, which is currently holding Mr. Archibald Gardner Dunn, the South African ambassador, for ransom.
AP

Demand for Volkswagens up by 22% in U.S.

BY GUY HAWTIN IN FRANKFURT

VOLKSWAGEN, THE U.S.'s newest car manufacturer, has seen demand expand there by 22 per cent in volume during 1979. Sales appear to have been curbed only by the group's ability to deliver, and VW has brought forward its DM 1.5bn (£392.2m) scheme to expand its U.S. works.

According to the company, which is West Germany's biggest car manufacturer, volume sales in 1979 totalled 282,017 units. This compares with 239,300 units in 1978.

The group, which producers an American version of the Golf—sold as the Rabbit—in former Chrysler plant at New Stanton, Pennsylvania, has had particular success with the U.S.-made model. Despite teething troubles in the early stages of production, the U.S. experiment appears to have been a major success.

Deliveries from New Stanton have risen from 23,017 units in 1978 to 166,839 units last year. Total Golf sales were considerably higher—up from 149,170 units to 214,835 units—as for much of the year diesel-powered Golfs were supplied to the U.S. from VW's West German works.

The Golf model's advance, however, has been at the expense of other models of the group which have been sold in the U.S.—a not unexpected development. Sales of other VW models, including the Passat, fell from 1978's 89,830 units to 77,182 units.

This year, the group expects sales to rise by a further 11.3 per cent to 325,000 units. Of this, the Pennsylvania works will account for deliveries of 225,000 units.

Volkswagen's expansion in the U.S. market is expected to continue for some time, as it is at present the only domestic manufacturer nf small vehicles. Direct competition from the Detroit manufacturers is not foreseen for another couple of years.

A-300 order for Tunis Air

By Terry Dodsworth in Paris

AIRBUS INDUSTRIE has won another new client with nne firm order for the A-300 Airbus placed by Tunis Air. The Tunisian company has also placed an option on another aircraft. It is planning to use both on its European and Middle Eastern network.

This deal brings the number of Airbus orders and options to 398, including the A-300 and the shorter A-310 versions. Airbus is hoping this latest agreement will help it to make further inroads into the North African market, where it has had difficulty in dislodging Boeing from its dominant position.

Swedish car sales up 7%

BY JOHN WALKER IN STOCKHOLM

NEW CAR sales in Sweden for the whole of 1979 amounted to 215,000 units, an increase of 7 per cent over the previous year's 200,874 units. The rise in sales was generally confined to the first half of the year with the weakness of the second half expected to show signs of improvement early this year. Even so, sales will have to be pushed to their limit if they are going to reach a level like that nf 1976, when sales topped 321,000 units.

Volvo and Saab — both Swedish manufacturers—have jointly 40 per cent nf the Swedish market, leaving the balance of 60 per cent to imported cars. Volvo has increased its market penetration from 49,831 units in 1978 to 55,751 last year, equivalent to a market share of 25.9 per cent. Saab has increased its sales from 28,600 units in 1978 to 30,805 last year, a market share of 14.3 per cent.

Of imported cars, Volkswagen leads with sales at 24,475 units, equal to a market share of 11.4 per cent, marginally up on the previous year. Ford has slightly increased its sales to 22,738 units, with a share of 10.6 per cent. General Motors has increased its share from 9.2 per cent in 1978 to 10.5 per cent last year—equivalent to 22,690 units.

Danish ship earnings to rise

COPENHAGEN — Denmark's total foreign exchange earnings from shipping are expected to rise in 1979 to abont Kr 10bn (£847m) from Kr 8.8bn in 1978, Mr. J. D. Lauritzen, chairman of the Danish Shipowners Association, has announced.

This will enable shipping to retain its place as Denmark's third largest export industry.

Last year was favourable in many respects for Danish shipping, since freight rates showed considerable gains on 1978 because of improved demand, especially for larger vessels and specialised tonnage.

The firm freight market had enabled all laid-up tankers to resume sailing, so that Denmark's only lay-ups at present are some car ferries and older dry cargo vessels, Mr. Lauritzen added.

But the merchant marine would show a slight decline for the first time in many years and the number of ships would fall, because of the high cost of sailing under a Danish flag. The owner's new building programme was the smallest for many years and could not keep the fleet at its present level.

The weak freight market from 1975 to 1978 had cut into owners' reserves, so that many smaller owners would have to sell out unless rising market demand affected their vessels. Reuter

U.S. TRADE DEFICIT WITH JAPAN

Putting the blame on industry

BY IAN HARGREAVES IN NEW YORK

THE SHORTCOMINGS of the U.S. manufacturing industry are more to blame than Japanese trading restrictions for the U.S.'s estimated $9bn trade deficit with Japan.

This is the general conclusion of an internal U.S. Government report by the office of the Comptroller General.

Prepared as background material for congressional discussions on U.S. trade policy with Japan, it has been completed at a time when there is growing pressure in Washington for political action to stem the flow nf several key Japanese exports, including cars and steel to the U.S.

But the report offers little ammunition for political groups which seek to portray Japanese trading practices as unfair.

Only in the case of the telecommunications industry does the study conclnde that significant tariff or non-tariff barriers exist as a block against the progress of U.S. exports to Japan.

Among the shortcomings of the U.S. approach listed are:

● Superior Japanese industrial investment. Between 1970 and 1978 Japan's ratio of gross fixed investment (excluding bonsing) was double that of the U.S.

● Japan has used industrial planning to promote strong industries, whereas U.S. Government policy has concentrated on protecting weak industries. Japan's selective aid for key sectors through fiscal benefits is helping the Japanese computer industry to emerge as a world force.

These weaknesses, the report points out, have led to a decline in U.S. export performance generally in the last 10 years, during which the country's share of free world exports has fallen from 18 per cent to 14.2 per cent.

This loss has been spread across all areas of manufacturing and is related to declining U.S. productivity. In the period 1970 to 1977 outpnt per hour grew by only 2.3 per cent in the U.S., compared with 4.2 per cent in Japan and 5.7 per cent in West Germany. Only the UK did worse than the U.S. with a 2.2 per cent growth figure.

Turning to case studies of particular industries, the report find that only in the telecommunications business is Japan still pursuing a clearly obstructive course in dealing with would-be imposters.

Most of the blame for this situation is attached to Nippon Telephone and Telegraph, the public corporatinn which regulates access to the Japanese telecommunications market and which, in practice, the report says, ensures that virtually all contracts go to a select family of demestic companies.

Imports have been restricted to only 2.7 per cent of the Japanese telecommunications market in 1977 and the report sees little immediate prospect of an improvement in spite of a U.S.-Japanese agreement to negotiate a new understanding on telecommunications trade by the end of this year.

By contrast, the report gives only limited support to one of the most vigorously fought cases of a U.S. manufacturer seeking to counter Japanese competition, that of the television manufacturer, Zenith.

Zenith has argued strongly that its efforts to penetrate the Japanese market at a time when Japanese exporters were savaging the U.S. Colour television market were blocked by systematic official and unofficial barriers co-ordinated by Government officials.

These factors, the report acknowledges, have made the export of televisions to Japan more difficult. But it says thet virtually all the tariff and non-tariff import approval problems significant in the 1960s have been dismantled. It also notes the slowness of the U.S. response to Japanese competition in this field.

In the motor industry the report suggests more could be done to remove petty product specification requirements for imports into Janpan, but the relaxation of Japanese foreign investment rules has also permitted the major U.S. motor companies to take direct stakes in Japanese motor companies.

United States Japan Trade Issues and Problems, U.S. General Accounting Office Distribution Section, Room 1518, 441 G Street NW, Washington, D.C. 20548.

The U.S. is planning to send Mr. Robert Hormats, Deputy International Trade Negetiator, to Tokyo soon to work with Japanese Government officials in an attempt to head off friction in bilateral trade relatiens, the Japanese Foreign Ministry said yesterday. Mr. Hormats is to confer with Japanese officials on problems arising from the increase in Japan's exports of cars and steel products to the U.S., the Ministry added. Agencies

Singapore and China sign new trade pact

SINGAPORE—Singapore and China will undertake more industrial co-operation following a new trade agreement signed between the two conntries, Reuter reports.

Mr. Hon Sui Sen, the Singapore Trade Minister, said on his return from China that details of "industrial complementation" would have to be worked out as it wonld involve both the private and public sectors. Signing the agreement with him in Peking was Mr. Li Qiang, the Chinese Foreign Trade Minister.

Industrial complementation among the Association of Southeast Asian Nations (ASEAN) usually involves the investors getting part of the produce as payment for funding and services. In the long term, Singapore could export industrial products and in turn purchase raw materials from China and its industrial plants, he said.

Katharyn Davies adds: The new trade agreement will facilitate credit arrangements fur the sale of capital goods to China. Mr. Hon said that up to now China has paid for its purchases of industrial products on a cash basis. However, as part of its modernisation programme China is likely to require credit and the formalisation of a trade pact will make this easier to arrange.

Under the agreement, the two countries will grant each nther most favoured-nation status nn customs duties and other taxes and duties in respect te trade.

They will also provide the maximum facilities possible to increase bilateral trade and narrow the existing trade gap, and all payments between them will be made in freely convertible currencies.

In the first 10 months of 1979 tntal trade between Singapore and China had already reached S$1bn (£210m) according to official figures.

In 1978 China's imports from Singapore totalled S$130.7m while exports amounted to S$775.5m.

A difficulty for the Singaporeans is that they have declined to normalise diplomatic relations with Peking until their ASEAN partner, Indonesia, does so. Meanwhile, Singapore Airlines is planning weekly flights to Peking and Guanzhou from April.

● Passenger ship service between Shanghai and Hong Kong resumed yesterday for the first time in 28 years, AP reports from Tokyo. The Xinhua news agency said the 19,000-ton passenger cargo vessel Shanghai left Shanghai in the afternoon with a capacity load nf 400. The 850-mile voyage to Hong Keng takes 56 hours.

Bid for Zambia, Rhodesia links

LUSAKA — The Lusaka Chamber of Commerce and Industry plans to establish relations with its Rhodesian counterparts, with a view to promoting trade between the two countries, AP reports.

Mr. James Watson, chairman, said yesterday he would go to Salisbury for a series of meetings on financial arrangements regarding exports and imports.

● Kenya Airways is to begin a service from Nairobi to Salisbury, John Worrall reports from Nairobi. It will be the first direct commercial contact between Kenya and Rhodesia since 1965. Kenya is one of the four Commonwealth countries which have sent peacekeeping troops to Rhodesia.

Iran copper mine exports at risk

BY SIMON HENDERSON IN TEHRAN

THE HEAD of National Iranian Copper Industries, Mr. Mostafa Maddah, has predicted that work on production facilities for the Sarchesmen copper mines — one of the world's biggest deposits — may be completed in six to 12 months.

But it does not appear that any of the copper from the mines will be available for export. Mr. Maddah said that annual production will be kept at an initial level of 145,000 tons, all for the domestic market.

Some problems had arisen with the final operation of the project owing to the sudden departure of contractors and U.S. consultants, he said in a newspaper interview. A group of Iranian consulting engineers have been brought in to assist.

Under the original development plan, two American companies, Anaconda and Parsons Jurden, were to handle the mining and processing, and two European companies, one from West Germany and the other from Belgium, were to deal with the end processes. The whole cost was estimated at $1.6bn (£714m) and annual production was to reach 500,000 tonnes.

After the Iranian Revolution, the project had been suspended and the contract with Anaconda was cancelled. At the time, the mine and the initial process plant were 90 per cent complete.

The contract with Parsons Jurden was revised so that NICI would introduce Iranian engineers to the company to finish off the work. According to Mr. Maddah, Iran is studying how to set up the refining nf blister copper—above 96 per cent purity—independent of foreign expertise.

Decision-making was now being handled by Iranian personnel and domestic Iranian industries were being invited to manufacture spare parts for the complex. A number of non-aligned European states had been approached on questions of technical knowledge, but Mr. Maddah did not specify which these were.

● South Korea's Energy Minister, Mr. Yon Sae Yang, met yesterday with Sheikh Ali Khalifa al-Sabah, Kuwait's Oil Minister, on prospects of supplying South Korea with additional amounts of crude oil, AP-DJ reports from Kuwait.

Mr. Yang arrived in Kuwait on the first leg of a gulf tour, that also will take him to Saudi Arabia and Oman. He will be asking Kuwait to buy Gulf Oil's share in the Sonth Korean Petroleum Cnmpany. The American company is due to sever ties with the South Korean company later this year. Most of South Korea's annual oil requirement of 228m harrels is being imported from Saudi Arabia and Kuwait.

Swiss machine sales increase

BY JOHN WICKS IN ZURICH

SWISS manufacturers of weaving machinery have been able to consolidate their position nn world markets again, with a share of nearly 50 per cent of total world exports.

This is reported in a study published hy Union Bank of Switzerland.

The improvement recorded for the sector in 1979, due partly to what is described as "extremely successful" participation at the International Textile Machinery exhibition (ITMA) in Hanover last October, followed a period in which Swiss market share had been lost to foreign competitors.

Major markets for Swiss Weaving machines remained the industrialised countries nf Europe, though manufacturers were able to retain their strong market position in the U.S.

Demand from developing conntries, with the exception of Egypt, remained "modest."

Due to the stable Swiss franc exchange rate and the rise in demand, there was no further deterioration in profits in 1979.

Price pressure eased somewhat, and new products with a good cost-performance ratio were able to be sold at higher prices.

Orders on hand at the end of 1979 are said by the bank to promise full capacity use this year. However, since prices will be able to be raised only gradually, no marked improvement in profitability is expected.

$100m cement plant for UAE

By Our World Trade Staff

THE INTERNATIONAL Resources and Fioance Bank has completed arrangements for the fioancing, construction aod management of a $100m (£45m) cement plant for the Emirate of Fujairah.

The plant, which will be capable of producing 520,000 tonnes a year, will be built by Voest Alpine of Austria, with Kaiser Engineers of the U.S. as project maoagers.

Construction is to begin in three months and is scheduled to be completed in spriog, 1983.

Oil companies attack N. Sea licence plans

BY RAY DAFTER, ENERGY EDITOR

OIL companies have attacked two of the fundamental proposals in the Government's plans for the next round of North Sea oil exploration licences.

They have told Energy Department officials that there are too few blocks on offer to maintain oil self-sufficiency into the 1990s. They have also criticised a plan which would lead to companies bidding cash for some of the exploration licences.

On the other hand the industry has welcomed Government proposals which would enable companies to apply for blocks of their own choice. This could be an innovative feature of the seventh round of offshore licences which are to be awarded later this year.

The industry's views have been put to the Energy Department by the UK Offshore Operators Association (UKOOA), an organisation representing 33 designated operators of UK oil licences.

A more detailed response to the Government's seventh round plans, announced a month ago, is to be submitted by the association later this week.

Uneasy

Although UKOOA has made no public statement about its views, it is known that companies are particularly concerned about the size of the round, about 70 blocks which makes it one of the smallest since licences were first allocated in 1964.

The industry argues that there should be sufficient licences to support between 60 and 95 exploration wells a year. It claims this is the level needed to maintain oil self-sufficiency through the 1990s. In recent years the industry has fallen short of this drilling target; last year only 62 exploration and appraisal wells were drilled.

Companies are also uneasy about the Government's idea of inviting cash bids for some of the most keenly sought-after blocks. These blocks would still be allocated at the discretion of Ministers, as they are at present.

The industry maintains it would be unfair and unduly complicated to mix cash premiums with a discretionary system. For instance, how would the Government balance low cash bid from a British oil consortium against a high bid from an overseas group?

In its detailed submission UKOOA will probably argue that the Government should either adopt a strict auction system—as tried experimentally in the early 1970s—or keep the purely discretionary method whereby applications are viewed on the basis of expertise, past record, financial standing, drilling proposals, national status and so forth.

While the idea of choose-your-own-blocks has been welcomed by the industry in general, some companies want the area of these blocks to be extended. At present the Government is proposing that these blocks will be in the more mature oil-producing region of the northern North Sea.

UKOOA is expected to call for this area to be extended to the southern part of the North Sea — the location of Britain's main natural gas fields. It is expected that the Government will encourage British Gas Corporation to pay full oil-related prices for newly discovered natural gas (as opposed to the low prices now being paid for Southern Basin gas). As a result, companies feel there will be sound commercial reasons for exploring further in the gas-producing region.

However, the industry is worried about the rules on surrender of licensed areas. At present companies must return to the Government a substantial proportion of their licensed area — half to two-thirds — after a period of six or seven years.

Companies argue that in frontier areas the period is not long enough for them to appraise drilling concessions fully.

They are also concerned that the trend towards the allocation of smaller licences—often just a single block, or even part block—will force them to surrender areas containing proven oil reserves.

Early fall in home loan rate unlikely

BY MICHAEL CASSELL

AN EARLY fall in the new 15 per cent mortgage rate seems unlikely and any reduction, when it comes, might not fully reflect the decline in the general level of interest rates, according to Mr. Leonard Williams, chairman of the Building Societies Association.

Writing in The Building Societies' Gazette, Mr. Williams holds out little hope of any short-term fall in general interest rates and warns that once they do begin to drop the societies "will need to ensure they adopt interest rate structures which will enable them more effectively to meet the growing demand for mortgage finance than they did throughout most of 1979."

His comments represent another warning that societies might use the next period of falling interest rates to establish a fresh approach to their interest rate policies.

The plan centres on the principle of injecting greater stability into the mortgage rate while allowing investors' rates to move closely in line with competitive interest rates.

If interest rates drop significantly, building society investors' rates will eventually follow, although with a higher competitive edge over other deposit taking institutions. Such a move would, it is hoped, increase the supply of funds for lending.

The scope for reducing the mortgage rate would consequently be limited and could be less marked than on the investors' side. Societies would eventually hope to maintain a higher home loan rate in return for a less volatile outlook for borrowers. It could mean that interest rates generally next rose, borrowers would not face higher repayments.

Mr. Williams' comments come ten days before the Building Societies Association announces the results of a study to establish what alternative sources of funds for mortgages will be required—if needed.

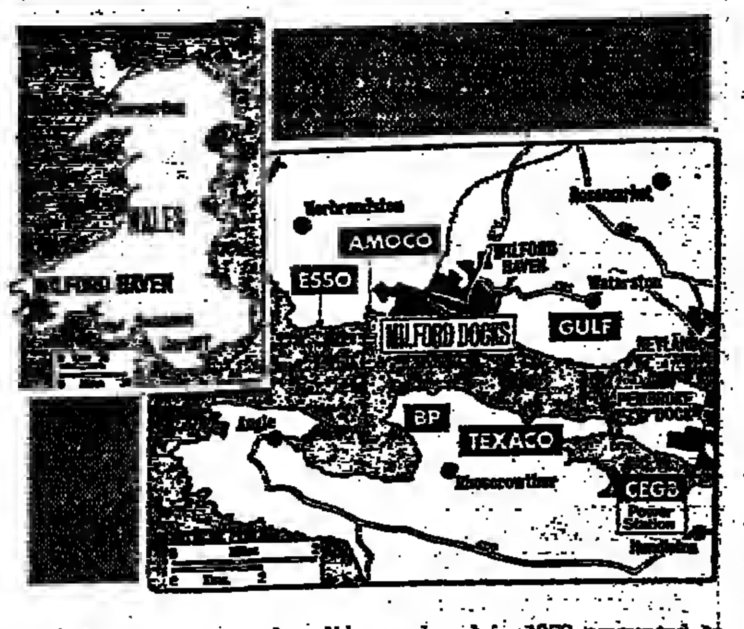
The general conclusion appears to be that the retail savings market will continue as the societies' principal source of money and that more competitive interest rates and a wider range of savings options can help tap extra funds from other sources.

The raising of limited volumes of finance from the wholesale money markets has not, however, been ruled out, although it seems clear that any significant move in this direction would require acceptance of the "more expensive mortgage money" policy now being discussed.

THE TROUBLED PORT THAT FACES A CRITICAL VOTE

Milford Docks shareholders meet to debate 'ginger group' bid

BY WILLIAM HALL AND CHRISTINE MOIR



LORD NELSON once described Milford Haven as the finest deepwater harbour in Europe. Milford Docks Company shareholders will, approximately enough, be debating their company's future next Friday morning in the Lord Nelson Hotel in the harbour.

Despite its undoubted natural advantage, Milford Haven has never lived up to the great future predicted for it. Friday's meeting will see yet another band of dissident shareholders, led by Scanoil, attempt to put back on the map one of the country's smallest and doziest ports.

In the last century, with the growth of transatlantic passenger traffic, Milford was seen as an ideal European terminus for the great ocean liners. The Milford Docks Company was established by special Act of Parliament in 1874 to capture passenger traffic from places such as Liverpool and Southampton, a dream which continued into the 1950s.

However, like so many later schemes, this came to nothing. Instead, Milford Docks has been a boardroom battleground for as long as anyone can care to remember.

In 1954, the controversial World War II hero Commander Bobby Bristowa won control of the company. He announced a series of ambitious plans to expand Milford, only to be scuppered at the last moment by the big oil companies who moved in and set up their own deepwater oil terminals on the other side of the harbour.

By the late 1950s shareholders were restive again, and Sir Julian Hodge was pressing for answers as to why the company had stopped paying dividends.

Chairmen came and went, but Milford Docks only slid deeper into the red. In 1962 Mr. Charles Smith, the present chairman, called a special meeting to dislodge the board on the grounds that "valuable assets were not being used to their best advantage." He succeeded in reforming the board, and plans were made to turn the dock into an iron ore terminal. Unfortunately, the Government vetoed that plan and the then chairman asked for a receiver to be called in.

That was too much for Mr. Smith. Yet another board was appointed in 1966, four members of which are still with the company.

Under Mr. Smith's leadership Milford Docks has moved back into the black (1978 pre-tax profits £241,039), paid off the arrears of interest on the debenture stock and started paying a dividend again in 1976 for the first time for 22 years. Its pre-interest return on total capital employed in 1978 amounted to 14.3 per cent.

Milford Docks shares have risen from a low of 11p in 1971 to 17½p, a 50p rise from the year's low, but have now fallen back from the peak of 214p.

But now another ginger group has sprung up disappointed, like Mr. Smith's, with the return on assets and seeking a boardroom reconstruction.

It consists of 24 shareholders who between them own 27 per cent of the company. The leader is Scanoil, a private company controlled by Mr. Richard Eldridge, a financier formerly with Slater Walker, the collapsed Eldridge Stableford Group and Mr. Dennis Barkway's Energy Finance and General Investments.

Hasty moves

The connection with EFG is close. Several of its nominee companies feature in the ginger group. Other members include Mr. Stephen Maltz, who ran Tower Assets before Tremletts unhappily took it over, and Mr. Cecil Benzecry, a former director of Jessel Securities.

If the group gets its three nominees on the Board it will still be outvoted 4-3, but only because of some hasty manoeuvring by Mr. Smith. He has recently appointed as a non-executive director Mr. David Blick, who runs a small fringe finance enterprise which forms part of the U.S.-owned Greyhound Guaranty group.

The ginger group is persistently vague about its intentions. Mr. Eldridge says that, as a major shareholder, he simply wants to be able to exert some influence over any future developments.

And that is where the excitement comes in. Milford Docks owns two blocks of land behind the port. One, of 17 acres, once had planning permission for light industrial use, although that has now expired. The other, of 24 acres, is farmland. Both are probably undervalued.

Now Mr. Smith has some far from concrete hopes that part could be used to build, say, skyships. But exploiting the property potential would be obstacle-ridden.

Once the boardroom position is sorted out Mr. Smith wants to ask shareholders for a cash injection to build wider lock gates, new warehouses and better access roads. Whether that goes ahead will depend on Friday's meeting.

The alternative is to let a trio of two accountants and an engineer—who can lay claim to experience in the shipping and energy fields—acquire substantial control over the company's future without making a formal bid.

Paisley blames Britain for 'poor security' in Ulster

BY STEWART DALBY IN BELFAST

THE GOVERNMENT'S constitutional conference on Northern Ireland, aimed at restoring more power to local political representatives, got off to a slow start yesterday amid protests by Unionist politicians about the security situation.

The conference attended by three of the four main Ulster political parties and chaired by Mr. Humphrey Atkins, the Secretary of State, began by discussing procedural matters including setting up the diary for when delegates could attend.

Some participants are European Parliament Members, or Westminster MPs—and in one case both. It seems the conference will meet for two or three days each week, and could last for months.

Before it is the Government White Paper which sets out theoretical models for political progress ranging from the old fully devolved parliament at Stormont to a system of councils with little legislative power but executive authority.

The first three-hour formal session of talks was preceded by a fierce statement from the main Unionist politician attending, the Rev. Ian Paisley, leader of the Democratic Unionist Party. He said last week had shown there was undisputable evidence that the British Government was not dealing effectively enough with the security problem.

"We will further intensify the pressure on those responsible for security to bring in effective and penetrating methods against the butchering thugs of the IRA."

Mr. Paisley's statement came the morning after it was learned that three Ulster Defence Regiment men were killed while on patrol in the border district near Newry. Their killings brought the total death toll in Ulster over 10 years of trouble to 2,001.

There is no firm evidence to suggest that the killings were timed by the Provisional IRA to coincide with the start of the conference. Mr. Paisley, however, as the self-proclaimed leader of Northern Ireland's Protestants, was bound to use the occasion to make a strong protest.

The UDR, which has both full-time and part-time soldiers, is almost completely composed of Northern Ireland Protestants.

Mr. Paisley has requested meetings with the Secretary of State, the general officer commanding, and the chief constable.

He would not be making a great issue of security at the conference, he said, since that was not what the conference was concerned with. But he would table a proposal about security. He expected it to be ruled out of order, just as he expected proposals on Irish unity by the main Catholic party, the Social Democratic Labour Party, to be ruled out of order.

On the aims of the conference, Mr. Paisley said that it was not reasonable to expect any kind of power-sharing or any discussion of Irish unity. His brightest scenario was that by the autumn there could be a locally elected devolved government.

He did not envisage participation by the Catholic minority in this Government that is power-sharing. But the White Paper contained several proposals for the views of the minority to be accommodated.

It was not clear at the start of the conference how Mr. John Hume, the SDLP leader, will be able to reconcile his party's desire both for power sharing and discussion of the Irish dimension with Mr. Paisley's statements.

Benn alleges Think Tank subversion

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

AN ALLEGATION that Government Think Tank members were engaged in "organised subversion" against Ministers who stood up to the Civil Service was made last night by Mr. Anthony Wedgwood Benn, leading Labour Left-winger.

Mr. Benn said on Granada TV's World in Action, the Think Tank—officially known as the Central Policy Review Staff—should be abolished or put under ministerial control, like every other department.

Mr. Benn, who was Industry Secretary and later Energy Secretary in the Labour Government, also attacked the senior civil servants. He claimed their power was too great, and that during his term at the Department of Energy important information was withheld from him.

The five examples cited — all concerned with the nuclear industry — were an explosion at a Russian nuclear weapons factory in the 1950s, the purchase of uranium from South Africa, the alleged hijacking of a shipload of uranium, the leak of radioactive effluent inside the Windscale nuclear factory, and the national debate on nuclear reactor choice.

As Energy Secretary, Mr. Benn said, he had favoured adopting the British AGR system for nuclear power stations, but his "top brass" wanted a crash programme based on the American pressurised water reactor.

His own political advisers tried to work on a paper advocating his views but immediately ran into difficulties with permanent officials. It was difficult to get an official even to assist his advisers in preparing the paper.

The Think Tank then stepped in, said Mr. Benn, and produced its own paper, incorporating the views of Energy Department officials. This was circulated in Whitehall and the CPRS staff rang up Ministers' private offices to get them to support the American reactor.

According to Mr. Benn, this was a classic example of the civil service trying to bypass a Minister. Later a member of the CPRS, whom he met at a party, described its way of working as "organised subversion."

Mr. Benn maintained that a Minister who stood up to the civil service would find the "huge machinery" of Whitehall brought to bear on him. It would try to "delay what he wants to do, isolate him so he doesn't know, or contain him and bring him back into line."

The Civil Service represented a "state within a state" and there was a danger that the country could be taken over by a bureaucracy operating within a cloak of secrecy. Unless we faced up to it, we could move towards a "commission" type of Government, where the real power rested with permanent officials.

Mr. Benn alleged that American intelligence had informed the Atomic Energy Authority of the catastrophe at a Soviet nuclear power plant near Kyshtym, but he was not informed either as Minister of Technology in 1966 or Energy Secretary later.

Nor was he told of the disappearance of 200 tonnes of uranium from a ship bound for Genoa. And he first heard of the Windscale leak was in the press. "I was furious when I discovered this had been going on without informing me," he said.

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Equities 'cheap'

By Barry Riley

BRITISH EQUITIES are commonly priced at between a third and two-thirds of their theoretical values, according to a new study produced by a leading stockbroking firm, de Zoete and Bevan. The brokers have introduced a new share valuation system based upon current cost accounting.

"In the short term, it is possible that the uncertainties of the economic situation will prevent share prices rising to a more realistic level," says de Zoete, "but it is probable that the truth underlying the valuation principles in this model will become more fully appreciated in the next bull market (probably in the early 1980s)."

CBI wants liability law on U.S. lines

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

PROPOSED EEC legislation on increasing manufacturers' liability for faulty products should follow the new laws being considered in the U.S., the Confederation of British Industry said yesterday.

In a letter to Mrs. Sally Oppenheim, Consumer Affairs Minister, the CBI says it is concerned that "the EEC is still proposing to hold manufacturers responsible for defects in their products which nobody could possibly foresee."

Under the proposed EEC directive manufacturers would be strictly liable for any injury caused by faulty products.

The CBI says this is wrong in principle and likely to be damaging in practice to the interests of both consumers and producers, particularly small producers. "To make a producer liable for something over which he has no control is to import social policy on compensation into the law of liability in a very dangerous way."

The CBI believes the EEC should follow the new "model" U.S. legislation which holds manufacturers liable for product injuries only if they can be proved to be at fault.

"This 'as-you-were' move has been designed by the Americans to escape from the trap they have fallen into through earlier legislation providing for liability irrespective of fault," says the CBI.

Ministers urge schools to use basic curricula

THE GOVERNMENT yesterday called on schools to ensure that all children spent at least 10 per cent of their time studying mathematics until they reach the minimum leaving age of 16.

A similar amount of time throughout compulsory schooling should also be devoted to English, said the Government's suggestions for a "national framework" for the school curriculum.

Education Ministers are starting discussions with local authorities and other interested groups with a view to gaining early agreement on the teaching of a core of basic subjects throughout the State education system.

The suggestions, published as the preliminary agenda for these talks, also stated that every normal pupil should study science and at least one foreign language.

Science should begin with a broad course in primary school, and develop into specialised or integrated studies at the secondary stage, where scientific studies should occupy between 10 and 20 per cent of the school time of pupils aged from 11-plus to 16.

"In general pupils should have a minimum of two, and preferably three years of foreign language teaching, amounting to about 10 per cent of school time during these years."

In addition, the suggestions call for greater emphasis on teaching children about the economy and on preparing them for working life. Careers teaching should begin not later than the third year at secondary school, and have a specific place in the timetable.

Call for more NHS aid

BY ROBIN PAULEY

THE GOVERNMENT supports the idea that the National Health Service should receive more financial help in the form of voluntary contributions from the public, Mr. Patrick Jenkin, Secretary of State for Social Security, said yesterday.

The present voluntary contribution to the NHS was modest—perhaps about £25m in all, including income from trust funds held by health authorities.

Money for much-needed services was short, which meant that necessary improvements could not be paid for. There was therefore a case for giving health authorities the power to participate in fund raising. Enabling them to appeal for funds would be an extension of their existing rights to accept gifts and administer trusts.

£6.23m loan for oil port

BY MARTIN DICKSON

THE EUROPEAN Investment Bank has lent £6.23m to the Shetland Islands Council for continued development of the oil port at Sullom Voe to handle supplies from North Sea fields.

The loan, for 10 years at 11.55 per cent, will go towards the construction of a fourth crude oil jetty for tankers of up to 300,000 tonnes DWT, a cargo jetty, a tug harbour and various associated facilities.

The EIB, the EEC's long-term finance institution, lent £11.07m to the same project last year and £16.9m in 1975 for an earlier phase of development.

The bank says that apart from helping to reduce the EEC's dependence on oil imports, the port at Sullom Voe benefits Community regional development. It reckons that around 650 jobs should be created locally by the port project.

Loan interest rates cut

LOAN INTEREST RATES UP

The interest rates for loans under section 7 of the Industry Act 1972 were reduced with effect from yesterday.

The concessionary rate of interest on loans for employment creating projects (Category A) is reduced from 14 per cent to 13½ per cent. The "broadly commercial" rate of interest on loans for modernisation projects not providing additional employment (Category B) is reduced from 17 per cent to 16½ per cent.

Motorists 'still have a choice'

By Kenneth Gooding, Motor Industry Correspondent

SIR MICHAEL EDWARDES' suggestion that it was "unpatriotic" for British businessmen to buy foreign cars was yesterday dismissed as "a public relations stunt" by Mr. John Wagner, managing director of the company which imports BMW cars to the UK.

"Sir Michael knows the public only buys cars they want to buy. The public still enjoys freedom of choice and the public reacts to skilled marketing," said Mr. Wagner.

He pointed out that the eventual recovery of BL was essential to Britain. "If BL fails it would damage the UK economy and hit the prospects of all importers."

Mr. Wagner is chief executive of BMW (GB), a company set up by Bayerische Motoren Werke of West Germany to take over the import of its vehicles to the UK. Previously the concession was held by the international trading group Tozer Kemsley and Milbourn (Holdings).

In 1979 some 14,000 new BMW cars were registered in the UK compared with 10,506 the previous year. Mr. Wagner said the total UK market was expected to drop steeply in 1980, but BMW still expected to sell just as many cars.

This would push up its market share from 0.8 to around 1 per cent.

At the same time the relatively high level of the more-profitable large cars, the seven-series, was expected to continue. In the UK last year the seven-series accounted for 24 per cent of overall BMW car sales compared with 10 per cent in the West German market.

And, despite pessimistic forecasts for 1980, "there will still be a market in the UK for expensive cars. We know that people who are successful are reluctant to lower their standards.

Bad year for British tourist industry

BY ARTHUR SANDLES

THE BRITISH tourist industry had a bad year in 1979. An English Tourist Board report confirms that most hotels did badly, in traffic terms if not in profitability, and in the peak summer months, London's cheaper hotels had a near disastrous time, with business down by nearly a quarter.

The English Tourist Board blames the fuel crisis, bad weather and strikes for the problems.

An ETB report on hotel occupancies in the first eight months of last year, based on figures prepared by A. C. Nielsen, shows that there was an average drop of 3 percentage points in English hotel occupancy during this period when compared with the same months a year earlier (from 48 per cent to 45 per cent).

However, this overall figure disguises some alarmingly sharp drops in business in certain sectors of the hotel business.

Seaside hotels in June and July saw business fall off by 5 and 6 percentage points respectively to 54 per cent and 68 per cent occupancy. Fortunately for hoteliers, things improved in August when business was back to 1978 levels.

Country hotels had a bad July and August, for in both months they were 6 percentage points down on the levels of the previous summer. In rural areas it was the expensive hotels which suffered, quite the reverse of the position in London and the seaside resorts. The rural hotels ended the eight-month period with business down from a normal 43 per cent occupancy to 40 per cent.

But the real problem area seems to have been London. The average London hotel was only 54 per cent full between January and August compared with 64 per cent in the same period of 1978. Cheaper hotels in London, which were 87 per cent full in August 1978, were only 63 per cent full last August.

Meacher seeks probe

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

DEMANDS FOR an inquiry into the circumstances surrounding the recent deaths of people in police custody are likely to grow when MPs return to Westminster next week after the Christmas recess.

Mr. Michael Meacher, Labour MP for Oldham West, a leading figure in the campaign, has written to Mr. William Whitelaw, the Home Secretary, saying 2,230 allegations of assault were submitted to the police complaints board in 1978. But in not one case did the board recommend disciplinary charges.

Mr. Meacher is concerned about the case of James Kelly, who died in a police cell on Merseyside in June. This case has been taken up by Sir Harold Wilson, the former Prime Minister, whose constituency covers the area.

The Director of Public Prosecutions has said there will be no prosecution in the Kelly case.

Next week, Mr. Meacher will try to get a statement about the working practices of the DPP which led to this decision.

He will also press for a Select Committee to be set up to review cases where a decision by the DPP not to prosecute leads to widespread public concern.

This would be similar to the present "watchdog" committee of the Ombudsman.

Liberal MPs support the demands for an inquiry and some Conservatives are sympathetic. The matter is likely to be taken up by the Home Affairs and Civil Liberties Groups of the Parliamentary Labour Party.

Electric power worst, say users

By David Churchill, Consumer Affairs Correspondent

ELECTRICITY IS considered the most expensive and least satisfactory form of power according to a new survey of electricity consumers published today.

The survey, carried out by the Electricity Consumers' Council, also found that almost four out of every 10 households had done nothing towards energy conservation in the home.

Some 57 per cent of the 2,000 consumers in the sample survey considered that electricity was an expensive fuel, and they rated it the most costly of all fuels. Gas was considered the most economical of all the major fuels. Just over three-quarters of consumers said that their electricity bills were what they expected, but only 58 per cent thought the bills were reasonable.

The survey suggests that those consumers who rely heavily on electricity for domestic heating are the least happy with electricity as a form of fuel. They tend to use their heating for a shorter time than those with other fuels.

"This finding is of particular concern because many elderly people are in accommodation with electric heating, and for them keeping warm is the first priority," said Mr. Michael Barnes, chairman of the council, yesterday.

Coal work worth £400m a year to contractors

By Michael Cassell

THE CIVIL engineering industry can look forward to about £400m worth of work a year from the coal industry up until the end of this century, says a report from the Civil Engineering Economic Development Committee.

In its first market brief, the EDC says deep mining could offer up to £150m of work a year, with the balance involving opencast operations. The only factor which might jeopardise the otulook would be a major shift in competiveness away from coal.

The biggest outlay for contractors in mining, is on plant, with walking draglines costing up to £9m. The National Coal Board is prepared to buy very large items and lease them to contractors.

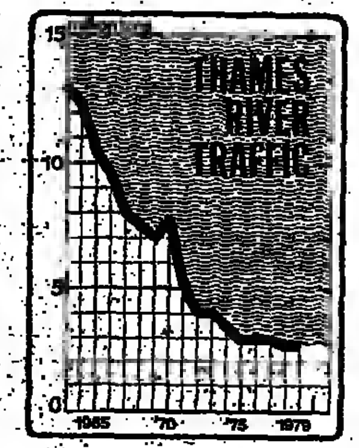
Lighterage takeover will cost 100 jobs

BY WILLIAM HALL

AROUND 100 lightermen and associated staff on the River Thames are being dismissed following the acquisition of Thames and General Lighterage by Ocean Transport and Trading. The takeover will result in Ocean Transport's two lighterage companies, Mercantile and Cory, becoming the biggest operators on the Thames and they will handle more than half of all the traffic.

Ocean Transport is paying around £500,000 for Thames and General which is roughly the same size as Mercantile Lighterage and operates 286 craft. Talks on the take-over began last year following Thames and General's decision to withdraw from general cargo and refuse lighterage operations. The company had been losing money.

Ocean Transport's lighterage companies are taking on 135 lightermen and a dozen salaried staff. It is understood that 70 lightermen are being returned to the National Dock Labour Board and 29 staff and employees of Brentford Barge Works have been made redundant.



The takeover of Thames and General is the latest in a series of mergers and closures of lighterage companies that have taken place as river traffic on the Thames has declined.

In the early 1960s more than 13m tons of traffic was carried by Thames' lighters and there were more than 100 members of The Association of Master Lighter Owners and Bargemen. The number of companies has now shrunk to a dozen and the tonnage carried has fallen to 2.8m where it seems to have stabilised.

In the 1960's between 3,000 and 4,000 men were employed in the Thames' lighterage business and there were about 4,600 barges. The number of registered lightermen has now fallen to 687 at the beginning of 1980 (against 799 a year ago) and the number of barges is down to 1,777.

Just over a year ago Clements Tough closed down, and last summer Darling Brothers wound up the lighterage side of its business. Thames and General carried about 550,000 tons of cargo a year and this will now be carried by Cory and Mercantile which together handle around 700,000 tons a year. The combined group will now operate 600 lighters and 30 tugs.

The only other big lighterage company now operating on the Thames is Humphery and Grey, part of the Hays Wharf group. The latter carries around 400,000 tons a year, employs 100 staff and 120 barges.

Decline in output soon

BY OUR ECONOMICS CORRESPONDENT

ALL MAJOR industrial sectors apart from energy are likely to experience a fall in output this year with particularly sharp declines in motor vehicles, engineering and shipbuilding. This is suggested by Cambridge Econometrics in its latest medium-term economic analysis.

Cambridge Econometrics is the commercial side of the Cambridge Growth Project, a university research study. This has developed one of the largest forecasting models of the economy now available, looking in detail at 40 industrial sectors. It is completely separate from the New Cambridge group of economists led by Mr. Wynne Godley.

The latest forecasts suggest that 31 out of the 40 sectors will contract again in 1981, although in most cases by a much smaller percentage than this year.

By 1982, actual falls in output are expected to be recorded by only half the industries covered, while the recovery should become fairly widespread in 1983.

Thereafter, the economy is expected to divide into two with a hard core of problem industries declining throughout the period while the rest of the economy experiences moderate expansion.

Total output, as measured by real Gross Domestic Product, is projected to decline by 1.2 per cent this year and to grow by 0.2 and 0.6 per cent respectively in 1981 and 1982.

Cambridge Econometrics believes that the 1980s as a whole will show poor, but not catastrophic, growth performances with GDP growing by 1.6 per cent a year. If the more stringent monetary policy now being pursued successfully moderates wage settlements, the growth of consumer prices would average 9.2 per cent between 1980 and 1990.

Unemployment, however, will be a major problem since it will exceed 2m for most of the decade.

Lady Kagan hearing starts

COURT COMMITTAL proceedings involving tax fraud charges began in Leeds yesterday against Lady Kagan, the wife of life peer Lord Kagan, and four others.

Lord Kagan was not in court and is believed to be in Spain. Reporting restrictions weren ot lifted.

The defendants are Lady Margaret Kagan, Mr. Michael Kagan, her son, Mr. Raymond Kennedy, Mr. Waldemar Ginsburg and his wife Mrs. Ibolya Ginsburg.

The two firms charged are Cellofoam (Yorkshire) of Raistrick near Halifax and Kagan Textiles of Elland.

With Lord Kagan, they are accused of conspiring to defraud the Inland Revenue.

Lady Kagan, Mr. Kagan, Mr. and Mrs. Ginsburg and Mr. Kennedy are charged with conspiring in the prohibited export of denim cloth.

Lady Kagan, Mr. and Mrs. Ginsburg, Cellofoam, and Mr. Kennedy are accused with Lord Kagan of prohibited exporting.

Mr. Ginsburg faces seven charges of falsifying accounts. Mr. Kennedy five charges of falsifying accounts, and Mrs. Ginsburg three charges of falsifying accounts. Cellofoam, Lady Kagan and Kagan Textiles face two charges each of falsifying accounts and Mr. Kagan one charge of falsifying accounts.

There are 20 charges which allege that offences were committed between June, 1974 and December, 1978. Six charges are being brought against Lord Kagan, eight against Lady Kagan, four against Mr. Kagan, 11 against Mr. Kennedy, 13 against Mr. Ginsburg, nine against Mrs. Ginsburg, 17 against Cellofoam and five against Kagan Textiles.

Inquiry to hear plea for more coal

By Martin Dickson, Energy Correspondent

THE DEPARTMENT of Energy is expected to provide strong support for the National Coal Board's controversial plan to mine in Leicestershire's Vale of Belvoir when the public inquiry into the scheme resumes today after a three-week Christmas break.

The Department believes failure to develop Britain's coal reserves efficiently will add substantially to future balance of payments burdens and will substantially reduce the country's security of energy supplies.

The Energy Department will be the second party to give evidence before the long-running inquiry. All 28 sessions held before Christmas were devoted to the NCB's presentation of its case, involving cross-examination of more than 30 Coal Board witnesses.

The NCB wants to sink three pits in the Vale of Belvoir area and extract 7.2m tonnes of coal a year between 1990 and 2060. It argues that exploitation of the Belvoir deposits—one of Western Europe's largest untouched coal reserves—is vital

But all or parts of the NCB's application are being opposed by a wide variety of interest groups, including residents of the attractive Vale and Leicestershire and Nottinghamshire County Councils. With more than 70 parties listed to give evidence, the inquiry seems likely to last at least until Easter.

The Energy Department is scheduled to be followed by the Agriculture Ministry which has objected to parts of the NCB application which propose to use agricultural land for on-site tipping

But it will be hard to gauge the full strength of the case against Belvoir for several weeks, since the most uncompromising opponents of the whole plan are still some way down the acheduled list of witnesses.

The Department of Energy, which has already submitted documents to the inquiry on Britain's future energy demands, believes UK demand for coal during the 1990s is likely to be at least at present levels and the chances are that the need to use coal will be rapidly rising at the end of the century.

Like the NCB, it argues that major new development of productive capacity is needed just to maintain output at present levels.

Steel shipments halted as picketing intensifies

BY OUR LABOUR AND INDUSTRIAL STAFF

PICKETING by steelworkers was tightened and extended yesterday as unions attempted to reinforce the effects of the strike.

Divisional and local strike committees in most areas decided pickets should try and halt movement of all steel to and from stockholders, regardless of whether it originated at the British Steel Corporation or the private sector.

These decisions, which follow a similar tactic employed in South Yorkshire last week, would intensify the effects of the dispute on customers, although many stockholders still appear to be unaffected.

There was also trouble on the picket lines when police intervened at the BSC Port Talbot works in South Wales after clashes between strikers and corporation employees wanting to go into work. Staff still working were escorted into the plant.

Steel-using customers, particularly engineering companies, were picketed for the first time yesterday, principally in Yorkshire and South Wales where strikers have been taking a particularly tough line.

Supplies of industrial gases to some Sheffield engineering companies were blocked and picketing was reported at Hoover and Metal Box plants in parts of Wales.

In South Yorkshire organisers for the Iron and Steel Trades Confederation, the biggest steel union, said road hauliers who persistently cross picket lines have been told steelworkers will refuse to load their lorries when the strike ends.

Co-operation

Solicitors acting for the Robert Frazer group, the largest independent steel stockholder in the north-east, have written to the union's regional office in Middlesbrough requesting that pickets be removed from its Hebburn premises.

ISTC regional offices said they were receiving almost total co-operation from lorry drivers and dockers although in some areas there were problems in preventing the movement of privately manufactured steel.

The width of picketing varies from region to region because of differing attitudes and variations in the numbers of men the union can muster.

This is particularly noticeable on the picketing of private steel makers. In South Yorkshire, strike committees are picketing those, including Hadfield's and Arthur Lee with the intention of stopping all steel movements. In most other areas private manufacturers are operating normally.

There is still considerable picketing of ports, particularly on the east coast and including Kings Lynn, Boston and Whitby. There is only minor picketing at many major ports, however, because of dock workers' assurances that although steel will be unloaded it will not be moved from the port area.

In Scotland, where picketing is still patchy, the 120,000-tonne Norwegian ore carrier the Skubo is trapped at the Hunterston ore terminal.

Shipbuilders 'faced with same problems as British Steel'

BY GARETH GRIFFITHS, LABOUR STAFF

BRITISH SHIPBUILDERS, which starts its pay talks with the shipbuilding unions tomorrow fears it will find itself in similar trouble as the British Steel Corporation over pay.

Mr. John Chalmers, moderate general secretary of the Boilermakers Society, said yesterday that the position of the company was in some respects worse than that of BSC.

While there was "some room for manoeuvre" in the unions' claim, it was doubtful that the 80,000 shipyard workers would accept less than the inflation rate of 17½ per cent. The unions had been aware that BS's financial position had been extremely tight since the middle of August and the industry had to fight for every order it got.

National union officials expect a low offer tomorrow which will fall well short of the 17½ per cent demand Mr. Chalmers said some money could be made available on local self-financing productivity deals but it could be only a partial solution. The mood in the yards was also likely to change after the Christmas holiday festivities, he said.

British Shipbuilders announced 6,000 redundancies last summer and there has been considerable resentment, particularly in some of the Scottish yards. The order book in September stood at 76 ships, with 684,973 compensated gros registered tonnes.

The corporation is also operating under very tight financial restraints. The Government has told it that it will be allowed to lose £100m in this financial year and £90m in the year ending March, 1981.

Although there has been a slight upturn in orders during the last couple of months, BS officials are worried orders will now be adversely affected by the wheat sanctions against the USSR which will hit bulk carrier demand.

BS officials are not optimistic about local productivity deals providing an escape route from their pay problem. The scheme agreed last March have already come into operation in some yards but are providing a maximum of £8 per week.

The Confederation of Shipbuilding and Engineering Workers Union has tabled a claim worth, it says, just over 20 per cent but which BS estimates at 30 per cent. In a letter to the CSEU last month, BS said it would be unable to make the kind of response the unions want. The claim would mean minimum earnings going up from £80 to £110 a week with proportionate increases for other grades.

● SCOTLAND'S main west coast container terminal at Greenock will be at a standstill at least until Thursday because of a pay dispute involving 29 maintenance engineers and electricians. The Clyde Port Authority said five ships had so far been turned back from the terminal since the dispute began at the weekend.

Action over pay likely in Civil Service union

BY PHILIP BASSETT, LABOUR STAFF

INDUSTRIAL ACTION over pay in the Civil Service this year looks more likely since yesterday, when the executive of the Institution of Professional Civil Servants considered the results of an arbitration award to 50,000 technicians which gives increases of 19-27 per cent.

Mr. Bill McCall, general secretary of the IPCS, which represents professional and specialist staff in the service, described the result of the tribunal as a "disaster for the Institution" in a circular to members.

The executive of the union yesterday discussed whether to stay in the service's pay research system, which determines the level of pay increases for all 600,000 white-collar civil servants by means of job-for-job comparisons with outside work, given the arbitration tribunal's findings.

Union officials are convinced that because tthe award falls so far below the 36-47 per cent claim for the 40,000 technicians and 10,000 related staff, the chance of the Government avoiding industrial action in the Civil Service over its April settlement this year is slim.

Industrial action by the technicians last summer was called off when the union agreed to go to arbitration over the third stage of a pay increase due last April.

Although it was agreed at the time that the tribunal's report would not be binding, the traditionally moderate IPCS might feel reluctant to resume industrial action over last year's claim immediately, with this year's settlement date only a few months away.

The union is particularly concerned that the tribunal gave no reasons for rejecting its claim.

The award, made on the casting vote of Mr. David Calcutt, QC, tribunal chairman, is closely in line with the Civil Service Department's arguments on technicians' pay, and will be a bitter personal blow to Mr. McCall. It gives an average of only 3 per cent above the department's original offer of 15.5-24.1 per cent.

Under the award, the pay of Principal Professional and Technology (P and T) Officer rises from £7,448-£8,724 to £9,528-£11,021; P and T Grade 1 from £5,739-£7,064 to £7,313-£8,601;; Grade II from £4,869-£5,739 to £6,000-£6,901; Grade III from £4,326-£4,863 to £5,176-5,820; and Grade IV from £3,878-£4,326 to £4,635-£5,253.

Irish pound prompts dispute

THE IRISH Bank Officials Association last night instructed its 5,000 members in Ulster not to handle transactions between sterling and the Irish pound.

Staff are seeking a lump sum single payment — equal to 12 per cent of salary — for the extra work imposed by the break in parity between the currencies after Ireland's entry into the European monetary system. Bank staff in the Irish Republic have already received a 12 per cent payment.

The four main Ulster banks said they had made a 5 per cent single payment and an independent inquiry had recommended a further 4 per cent. But the offer was rejected and instructions for industrial action were issued.

Meccano sit-in at London office of Airfix

A HANDFUL of workers from the doomed Meccano factory at Liverpool staged a sit-in at the London office of Airfix, the parent company, yesterday in protest at the Edge Lane plant's closure.

Mr. Bernard Riley, engineering workers' union convenor, said: "We felt it was time to escalate our action in an effort to get something done. Other action is planned for the rest of the week, but I can't say what at this stage."

New talks between union leaders and Airfix bosses are due to take place on Thursday.

Airfix closed the Meccano plant — at first giving 900 workers just 30 minutes' notice — at the end of November, blaming losses of £4m, and union troubles, for the decision.

Safety plan for home workers

PEOPLE employed at home may soon be forbidden to use dangerous materials like asbestos and radioactive substances if proposals by the Health and Safety Commission are agreed.

The Commission envisages that firms putting jobs out to home workers would send information on materials or equipment used, to the local factory inspector. Dangerous substances would be banned or require special permission.

The ban would not include self-employed craftsmen or people marketing their own products.

● NEWS ANALYSIS—OPENCAST MINERS STAGE ONE DAY STOPPAGES

NCB's high-earning mines lose production

BY MARTIN DICKSON, ENERGY CORRESPONDENT

A SERIES of one day strikes has cast a spotlight on one of the least publicised, yet most profitable, branches of the British coal mining industry—the opencast sector.

During November and early December members of the Transport and General Workers' Union employed on opencast sites staged four one-day stoppages after rejecting a pay offer from the civil engineering companies which operate the mines. Each of the stoppages is estimated to have cost more than 40,000 tonnes in lost production.

Just before Christmas, however, union negotiators and employers reached an agreement on a new offer which seems likely to be accepted.

If so, no one will breathe a deeper sigh of relief than the National Coal Board, for the opencast sector plays a vital role in improving the NCB's financial performance, even though opencast mining provides just 9 per cent of the UK's total coal output. In the last financial year, for example, the NCB made a £97.5m profit on opencast sales, compared to a loss—before regional grant — of £91.9m on deep-mined coal.

Yet the NCB itself does not run the opencast sector on a day to day basis. Although the Board owns the coal and decides what should be mined where, it contracts the mining out to about 24 civil engineering companies that include Wimpey, Taylor Woodrow and Murphy Brothers.

The companies undertake to produce the coal for a specified price per tonne—with escalation clauses written into the contract to cover inflation—and to restore the site when mining is finished. The coal is delivered to the NCB and is added to the pool of deep-mined coal for marketing.

Opencast mining has much lower production costs than deep mining because it is essentially a question of digging out the coal with mechanical shovels.

This is why it is so profitable to the Coal Board. Last year the NCB reported a cost per tonne of £18.12 for opencast, compared to £24.87 for deep mined coal, and a profit per tonne of £7.07 for opencast (which is generally high quality coal), compared to a loss of 85p a tonne for deep mined coal.

The opencast business may be less profitable for the engineering companies which work the 56 sites currently in production, but there is nonetheless said to be strong competition to get contracts, especially with the downturn in the road construction market.

Some 60 per cent of opencast production is used in power stations, often blended with lower quality coals from deep mines. A number of North England power stations, including Wakefield, get more than 50 per cent of their needs from opencast sites.

The remaining opencast production is divided fairly evenly between the coking, general industry and domestic markets. Opencast sites, notably in South Wales, produce about half Britain's anthracite needs.

Production from sites is currently running at around 13m tonnes a year, compared to 105m tonnes deep mined. The aim is to boost production to 15m tonnes a year as part of the industry's general expansion. The NCB estimates this target will be reached in 1983—two years ahead of schedule.

The main brake on expansion is the long time it takes for the Board to obtain permission to work sites. Responsibility for approving or rejecting its mining applications lies with the Energy Secretary, who has to set up a public inquiry if there are any statutory objections to the plans from local authorities or landowners.

The environmental impact of opencast mining is the most controversial aspect of the industry. Critics argue that not only does it create rural eyesores during production and takes land out of farming, it also reduces the fertility of soil.

Scientific evidence suggests that productivity on restored land is lower—particularly in the first few years—but that reasonable levels can gradually be restored if the land is properly managed.

The NCB, which gets the Ministry of Agriculture to manage the land for five years after restoration, also points out that opencast mining often takes place on the site of derelict deep mines. And the Board claims that when restoration work is completed the landscape is improved.

APPOINTMENTS

Confectionery chief at Cadbury Schweppes

Mr. N. D. (Dominic) Cadbury has been appointed managing director of the UK confectionery division of CADBURY SCHWEPPES. He succeeds Mr. W. H. (Howard) Jones who is retiring. For the past two years, Mr. Cadbury has been deputy chairman of the company's American region. He has been a member of the main board since 1974.

He joined Cadbury Brothers in 1964 and two years later became marketing, sales and distribution director of Cadbury Fry Pty in South Africa. Mr. Cadbury returned to the UK in 1970 as sales and distribution director of the confectionery division and subsequently became its marketing director.

*

Mr. Bernard Norman, group managing director designate has been appointed to the board of the THOMAS COOK GROUP. Mr. Kevin Gavaghan, director, retail division of Thomas Cook Limited, has been appointed to the board.

*

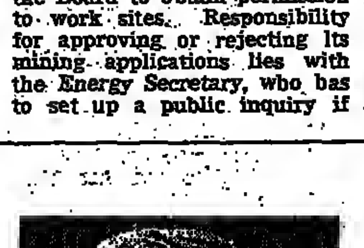
Mr. David J. Wills has been appointed a director of CHARTERHOUSE DEVELOPMENT, the development capital subsidiary of the Charterhouse Group.

*

Mr. David Probert, who is group chief executive of W. Canning, has been appointed chairman of Water Management Chemicals. Mr. Fred Essex, in addition to his present responsibilities with the materials subgroup, is appointed chairman of Polution Control and Water Management Engineering. Mr. Malcolm Day, previously director and general manager, is appointed managing director of John Betts Refiners. Mr. Nicholas Ford, previously director and general manager, is appointed managing director, and Mr. Roy Hurford and Mr. Alan Bevin, directors of Copal Foundries. Mr. John Davis is appointed managing director of Electron Distribution, a new company formed to distribute electronic components. Mr. David Protheroe is appointed managing director of Holyhead Engineering Co. All are companies in the CANNING GROUP.

*

Professor Christopher Blake, who holds the Bonar Chair of Applied Economics at the University of Dundee, has been appointed a non-executive director of WM. LOW & COMPANY the Dundee-based supermarket group. Professor Blake is also a director of the Alliance Trust group of investment companies.



Mr. Dominic Cadbury

Chairman at ICI Paints

Mr. R. C. Hampel, ICI's general manager, commercial, has been appointed chairman of ICI Paints Division from March 1. He succeeds Mr. D. H. Henderson whose appointement as an ICI director, from the same date, was announced recently. Mr. Hempel joined ICI in 1955 and held senior appointments in the UK and America before becoming general manager, commercial in 1977.

*

Sir John Hunt former Secretary to the Cabinet, will be joining the board of PRUDENTIAL CORPORATION and that of The Prudential Assurance Company the Corporation's principal operating subsidiary, from February 7.

*

Mr. Charles A. S. Crawley has been appointed a director of STENHOUSE REED SHAW (UNDERWRITING AGENCIES).

Airline's engineers ban overtime

BY GARETH GRIFFITHS, LABOUR STAFF

MAINTENANCE engineers at British Airways are to start an overtime ban Thursday which is likely to cause disruption to flights at Heathrow.

The eight shifts at the airport will in turn refuse to turn up for work in what union officials described as a "roll-on overtime ban." The action will support a claim for a 25 per cent increase in basic wage rates by the 11,000 engineering and maintenance staff employed by BA at Heathrow.

BA says the effect of the dispute would be minimal at first but if the ban went ahead contingency plans to reduce the inconvenience to passengers would be brought into operation.

The corporation's offer involves an increase in basic rates of 14½ per cent, an increase in shift pay in line with the Retail Price Index, and larger London weighting allowances and leave entitlements.

BA have told staff it wants higher productivity and there are strong indications the 14½ per cent offer would be improved in return for guarantees on greater working flexibility.

Mr. Stanley Havill, secretary of the joint unions executive committee at the airport, said the maintenance engineers felt they should have an offer without strings. There would be an indefinite overtime ban.

The settlement date for this year's pay agreement was January 1. BA officials say some progress on greater flexibility has been made with the maintenance engineers and other sections of its 33,000 ground staff.

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

● TRANSPORT

Repair labour cost cut by half

BODY-REPAIR and refinish trades in Britain are using a spray putty that can halve the labour costs between primer and top coating. Its speed of use means jobs can be turned round in substantially shorter time in the paint shop.

Bondspeed is a nitrocellulose spray putty simply sprayed on top of primer using a low-pressure gun. It produces a coating three times thicker than with conventional fillers. Additional coatings can be applied after two or three minutes and the refinished surface is ready for sanding and painting in under the hour.

For Britain the formula takes account of the UK's greater humidity. Corrosion-resistant yellow oxide is added and this serves the extra function of providing a neutral surface colour so that even a white top coat can be sprayed on as a single operation.

Unlike spray fillers that require hardeners to be added, Bondspeed is ready mixed. So there is no wastage through mixing too large a quantity, no lost time through carrying out the mixing and no problems of cleaning clogged spray equipment since the coating only begins to harden when it is fully exposed to the air.

No thinners are used and there is no shrinkage. Bondspeed's pre-mixed resins and hardeners set evenly and provide a smooth, shiny finish on which paint can be sprayed directly and will dry without flaking. Rapid hardening means it can be sanded sooner after application with considerable saving in the time taken to complete jobs. Labour costs on filler applications can be reduced by up to 50 per cent.

Application is by a low pressure spray gun such as the JGA gun manufactured by De Vilbiss and which will be standard equipment in most repair shops.

Leylin, Quadrant House, 21-5 Highfield Road, Doncaster, S. Yorks DN1 2LA. 0302 25982.

Ten per cent fuel saved

KYSOR radiator shutters fitted to tractor units, used by National Freight Corporation for liquid and powder transport, have proved highly successful.

Fuel trials carried out on ERF, Leyland and Seddon Atkinson vehicles covering up to 10,000 miles indicate that Tankfreight (NFC) will save as much as 10 per cent on fuel bills.

As a direct result of the trials, shutters have been specified as original equipment on all new vehicles and are to be retrofitted to all vehicles young enough to benefit from their use.

The fitting programme is going ahead at the rate of three a day and it is estimated that the shutters will have paid for themselves and the cost of fitting within four to five months.

The decision to try shutters was taken after it was noticed that engines were running at well under their recommended temperatures. Shutters achieve their fuel savings by maintaining the engine at its proper operating temperature, irrespective of engine load, ensuring that it is working at its most efficient level. By keeping the temperature up, Kysor claims, acid and sludge formation is reduced.

Thermal shock, a major source of engine distortion and hence premature gasket failure and engine wear, has been shown in independent trials to be cut to a minimum. Without shutters, the temperature difference between the top and bottom hoses can be as great as 60C, whereas with the shutters, this is reduced to between 4 and 6C.

Operation of the shutters is fully automatic. They are controlled by a Shutterstat temperature sensor or, where a thermal fan is fitted, by a Multistat device, which synchronises the operation of the shutters and fan. By opening and closing like a venetian blind, the shutters control the amount of ram air reaching the radiator and keep engine temperatures within 1.5C of the manufacturers' specification.

Kysor Industrial (G.B.), Bridge Works, North Street, Whitworth, Lancashire. (070 685) 2373.

● FINISHING

Stick-on abrasives for DIY

DECLARING an intention to make a more vigorous approach to the DIY market in the 80s, 3M has kicked off by making available its recently introduced sticky-backed abrasive papers to the retail trade.

Supplied in 60, 100 and 150 grades, the paper has a peel-off protective backing that exposes an impact adhesive layer which, although it holds the paper in place firmly during sanding nevertheless allows it to be peeled off when worn out.

Papers will be supplied for application to a plain-faced five inch rubber sanding disc made by 3M, for orbital sanders, and for a 5¼ x 2¼ inch band sanding block the company will be offering.

The rotary disc obviously needs no centre fixing screw and washer of the kind normally used on rubber discs to hold the paper in place. Work is less likely to be marked and application of the abrasive is much simpler. For the orbital sanders, once an initial, permanent vinyl pad is fixed using the sander's clips, subsequent applications of paper are a simple "peel off and stick on" operation. Many people says 3M, have difficulty with these clips.

Furthermore, the paper, which uses aluminium oxide in the two coarser grades and silicon carbide in the finer, is described as "open coated" and likely to become clogged less quickly than normal types.

The company claims that all these papers are less likely to tear in use and they are in addition damp proofed and should not become soft and weak in damp storage.

In the shops, where they are due to appear in March, the papers will be sold at prices only a few pence more than what is currently available. Already signed up by 3M are Woolworth, Marley and Esso garages, and point of sale display and dispensing units have been designed.

The company is at 3M House, P.O. Box 1, Bracknell, Berks. RG12 1JU (0344 26726).

● ELECTRONICS

Accolade for a UK micro

THOUGH RELATIVELY little is heard of the Ferranti F-100L, first micro to be designed, built and sold in Europe, it has become the first microprocessor to be granted BS9000 approval for itself and for its associated LSI support devices.

Apart from reinforcing the reputation of the unit in military and other extreme reliability requirements, the move adds a very valuable component to the BS9000 repertoire.

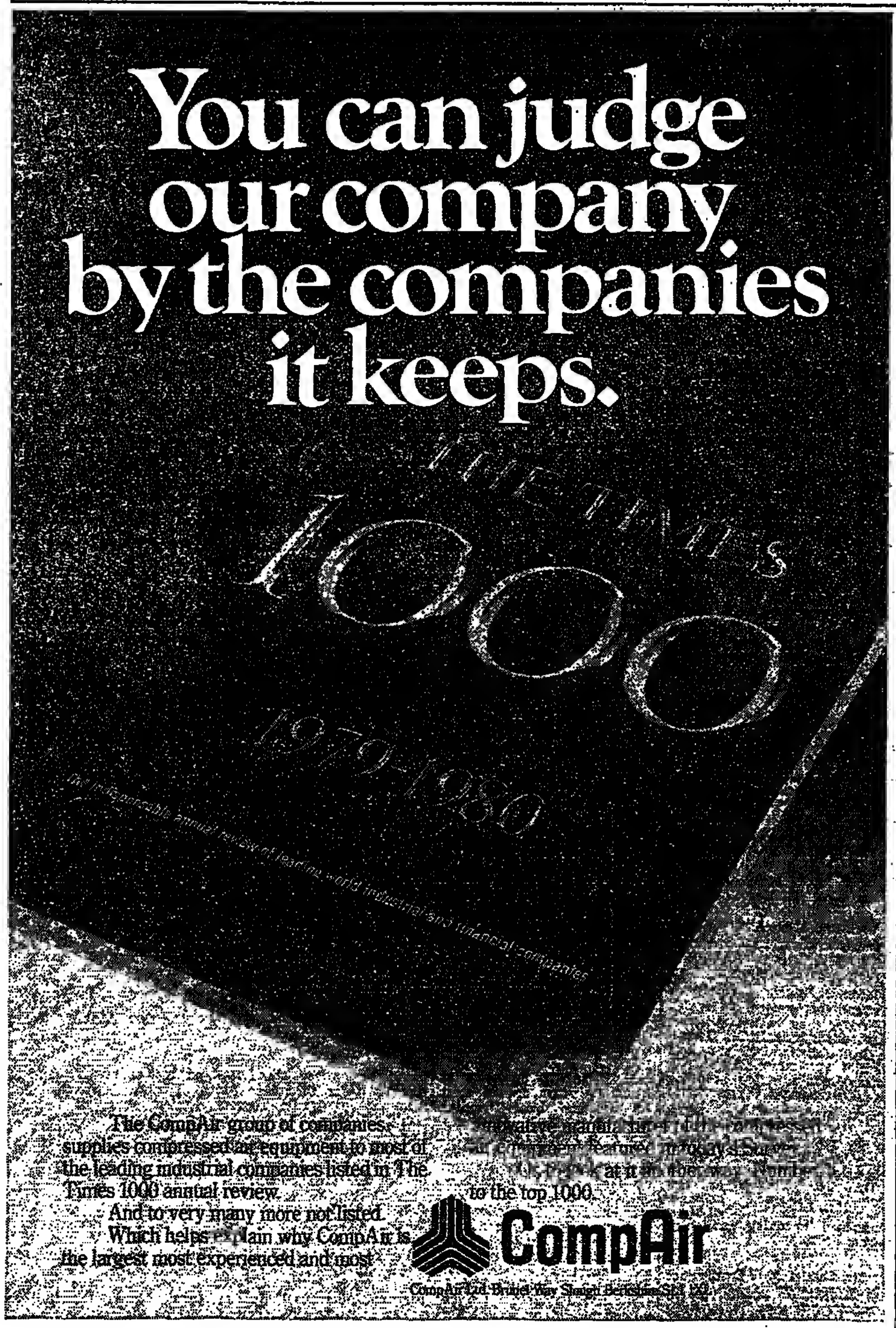
F100-L and its family of LSI devices are manufactured by Ferranti Electronics using fast, low power dissipation, high reliability bipolar technology. This enables all the devices in the family to operate across the full military temperature range (−55 degrees C to +125 degrees C).

The technology offers high resistance to radiation. Independent tests have established that F100-L is relatively immune to the effects of both neutron and ionising radiation, there being no experience of permanent malfunction even after high radiation doses.

F100-L is thus becoming the leading microprocessor for hard environments. This includes land, sea and air applications in weapon, machinery and radar control, communications, signal processing and navigational computing.

BS9000 approves the specification and quality assessment of electrical components, with independent certification from the Electrical Quality Assurance Directorate of the Ministry of Defence, on behalf of the British Standards Institute. The scheme establishes common terminology, test methods and specifications for electronic components, thus removing the need for multiple assessment. The scheme also creates a comprehensive data base of qualified products to the advantage of designers and engineers.

The comprehensive BS9000 approved specification for F100-L is now available from Ferranti Computer Systems, Western Road, Bracknell, Berkshire. Telephone: Bracknell (0344) 3232.



● CONSTRUCTION

Curves in cladding

NOVEL methods of curving the insulation lining for profiled steel and aluminium sheet cladding without interrupting the material's continuity, have been worked out by Teal Claddings, of Telford, Shropshire. 0952 585580.

By enabling the insulation lining to follow the curve of the material, there is no sacrifice of insulating properties, and the architect or designer has the opportunity to specify curves, sweeps and attractive contours.

Hitherto, this freedom of design has only been possible with indirectly insulated cladding material, i.e. where the insulation material is not integral, but this has often meant that the consistency of the insulation is inadequate.

Teal's new technique ensures that the polyurethane, polystyrene or isocyanurate insulation materials bond efficiently into the curve of the steel cladding to produce a continuous, unbroken lining which fully complies with the insulation requirements of the current Building Regulations.

The technique is being used initially in conjunction with steel Floclad facing panels to a 1 metre radius, but can be used for all types, say Teal.

In the case of Floclad, manufactured by Ash and Lacy Steel Products, it has ensured optimum use of this particular cladding's inherent span characteristics.

By employing the Teal process, fully insulated 88 mm thick Floclad claddings can be custom-shaped to form curves down to a minimum of 380 mm radius. Floclad with integral insulation lining is manufactured in two panel widths—900 mm and 1,050 mm—with profile depths of 26 mm and 37 mm. Panel lengths range from 1.2 m minimum to 9 m maximum and the thickness of the insulation lining is 50 mm.

● INSTRUMENTS

Fast check on diameters

KWIK CHEK orifice gauge is for the fast and accurate checking of small plain and countersunk hole diameters. It works on a very simple principle, directly transferring diameter measurements from a sliding tapered needle to a linear scale readout graduated in millimetres or thousands of an inch.

This simple-to-use, pocket-sized instrument, can be operated by any unskilled person. Magnified, direct-reading scales permit the easy reading of hole diameters to the nearest mm or thou. It is made of hardened steel, and is chrome-plated for maximum wear-resistance and long working life. All parts are replaceable in the event of damage.

Cavac Systems, Unit 15, Suttons Industrial Park, London Road, Earley, Reading RG6 1AZ. 0734 669663.

● MATERIALS

Keeps pools at right heat level

LOOKING LIKE a series of plastic studs on a plastic background, a solar pool blanket by Sealed Air International Corporation of Kettering, Northamptonshire, consists of air bubbles sealed between two layers of tough plastics film containing ultra-violet inhibitors.

Translucent and able to transmit solar energy into the water at all depths, the blanket gives a 10 F gain over an uncovered pool. It retains the absorbed heat through the day and reduces overnight heat loss to no more than 1 F. On heated pools, the blanket conserves fuel and can cut heating costs by 70 per cent or more.

Other benefits of installing a solar pool blanket include ability to reduce the loss of water and expensive pool chemicals through evaporation.

There are obvious industrial applications to be developed.

Sealed Air International Corporation, Telford Way, Kettering, Northamptonshire. Kettering (0536) 522347.

Simplifies the input problem

MANY OF the communications, control and instrumentation systems now being designed to incorporate microprocessor intelligence initially have to accept analogue signals—transducer outputs, speech and varying voltage levels in general.

They need to be conveniently digitised for manipulation by the processor's logical circuits and to date it has not always been possible to use ideally suited devices. Now, National Semiconductor says it is making available the industry's first family of "truly microprocessor-compatible analogue to digital convertors."

Known as the ADC 0804 family, these devices are complementary metal oxide silicon types working at eight bits and using successive approximation for the conversion process.

Operation is possible with the standard control bus of the 8080 processor derivatives and the devices have the electrical appearance of memory locations or output ports to the micro, so that no interfacing logic is needed.

More from 301 Harpur Centre, Horne Lane, Bedford (0234 47147).

Belts given high fire resistance

ALTHOUGH no BSI specifications yet relate to flame-retardant vee-belts, Optibelt has been developing new flame-resistant rubber compounds for them.

These compounds will be used for the manufacture of the company's first fire-resistant belts which will now be available in many sizes.

Obvious applications are in underground mining situations or high risk areas within chemical, gas and oil refinery plants where a spark could result in disaster. Safety is the key factor and the new range of vee-belts also has antistatic properties.

The new belts will have a service life which is not inferior to standard belts. They meet the stringent NCB specifications.

Visurgis (Great Britain), Towerfield Close, Shoeburyness, Essex SS3 9QP. 03708 5955.

Power on a single board

SIXTEEN bit micro already used in-house by Systems Reliability of Luton is to be made available as a single board stand alone computer called Mounex. The design is that used in the company's Tel-Tag telephone management and information system.

It is based on the Texas Instruments 16 bit 9900 device. Also on the board are eight or 32 kilobytes of random access memory, up to 24k bytes of electrically programmable read only memory, 22 programmable TTL buffered input-output lines and a pair of serial communications ports, synchronous and/or asynchronous.

The company says the machine has advanced memory-to-memory architecture giving rapid context changes, 16 interrupt levels, word and byte addressing and hardware multiply and divide.

More from 24 Rothesay Road, Luton, Beds (0582 38581).

● PROCESSING

Pure water package offered

WATER treatment company Elga Products reports that it is now able to offer a comprehensive planning service for the provision of the high quality water needed in the electronics industry, particularly for companies involved in semi-conductor manufacture.

Evaluation of a project, and detailed proposals would be followed by the provision of a "plant package" able to produce water with very low conductance (in the microsiemens range). Installation would be fast and simple.

Alternatively, individual tailormade schemes to include the economic Elga recirculator system linked to an in-plant distribution network will be designed, manufactured and installed.

The company is at Lane End, Bucks HP14 3JH (0494 881393).

FINANCIAL TIMES SURVEY

Tuesday January 8 1980

COMPRESSED AIR INDUSTRY

Despite the growth of rival technologies, compressed air continues to play a vital role as a source of power in factories, on construction sites and in a host of other applications. This survey, which coincides with the 50th anniversary of the British Compressed Air Society, examines the structure of the industry and its prospects.

Huge variety of uses

By Geoffrey Owen

IN CONTRAST to the glamour of electronics, mechanical engineering is sometimes regarded as conservative and old-fashioned, condemned to sluggish growth and declining economic importance.

Based on technologies which are mostly at least a bundred years old, it clearly cannot aspire to the *revolutionary* impact on society associated with micro-processors and micro-chips. Buf mechanical engineering remains the bed-rock of industrial activity in the developed countries. Its technologies, of which compressed air is one example, are basic and well-proven; they perform functions which cannot easily be taken over by other technologies; and they are capable of refinement and improvement.

So the companies which have a beavy commitment to compressed air, an important sector of mechanical engineering, do not have to console themselves with thoughts of past glory. Their products and expertise are still needed. If they are astute enough in their product development and their marketing they can achieve growth rates and profit levels which are respectable by any standards.

It was the second half of the last century which saw the establishment of compressed air as a means of transmitting power to operate rock drills, cutting tools and other equipment. One of the first major applications was in tha construction of the Mt. Cenis railway tunnel in the Swiss Alps, which began in 1857. Compressors were installed at the two ends of the tunnel to supply air to the rock drills; when the two teams met in the middle there were 7,000 metres of air line in use.

The success of the Mt. Cenis project gave a fillip to the devalopment of compressed air *for other applications*. There was talk of building a distribution network or grid wblch would connect factories and offices to a common source of compressed air. One such network was built in Paris in 1888 and for some years enjoyed considerable success and publicity.

It was based on a 1,500 kilowatt compressor plant serving seven kilometres of mains and 50 kilometres of subsidiary feeder lines; the air was used to power clocks, passenger lifts, dispatch systems, generators and other equipment.

Although it soon became clear that for distributing this sort of power electricity was more efficient than compressed air, the other technology did not fade away. Compressed air was able to establisb itself as a "fourth ntility" for manufacturing industry. It began to be seen as an important supplement to electricity, water and gas, but with the crucial difference that most factories have their own in-house compressor to supply compressed air wbereas the other services are bought out from municipal or national ntility companies.

Hand-held pneumatic tools were abla to enhance the performance of the human band without removing its flexibility and sensitivity. Compressed air also began to be used for monitoring and control purposes.

Outside the factory portable compressors establisbed themselves as an essential utility on the construction site and in mining operations, supplying power to paving breakers, rock drills and a variety of other equipment.

Thus compressed air has become a major source of industrial power possessing many advantages over alternativa tecbnologies. It is safe, economical, easily transmitted and adaptable.

There is an enormous variety of applications for compressed air. Construction and mining machinery represent large markets. Within the factory compressed air is used to power a wide range of assembly tools; the motor manufacturers and the producers of domestic appliances are important customers.

Attractive

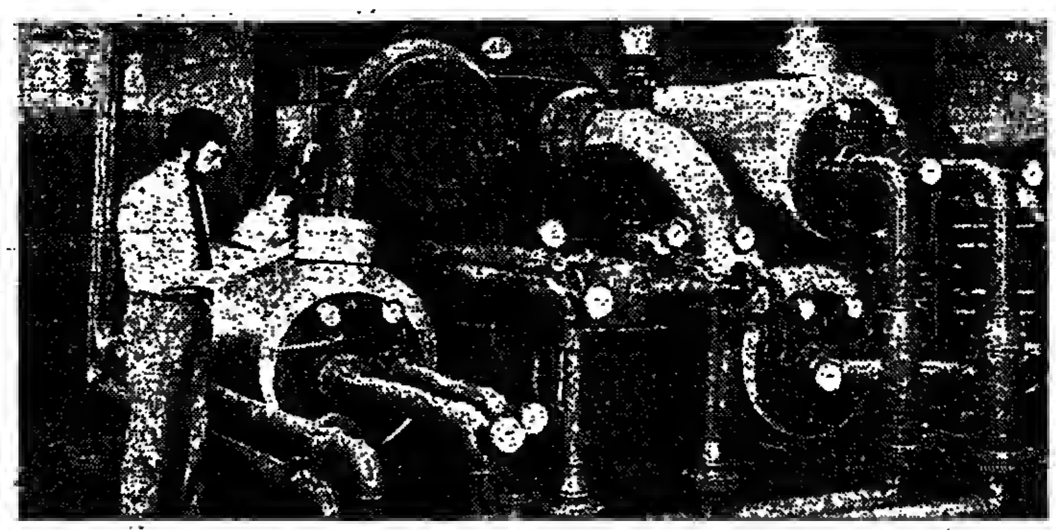
Pneumatic controls have been developed to take the place of manual labour in the operation of machine tools and in a host of industrial processes; despite the growth of electronic devices low-cost automation through pneumatic controls remains an attractive and economical approach for many applications.

In construction and mining equipment, bydraulics have made some inroads and will continue to do so, bnt bere again the characteristics of compressed air—safe, reliable, and relatively simple to operate—will ensure that it retains a very substantial sbare of the business. A number of the leading compressed air companies bave developed or acquired expertise in hydraulics, so that they are represented in both branches of wbat is sometimes called the flnid power industry.

To serve the many markets for compressed air a substantial industry bas grown up and ooe that, because of the diversity of applications, is not easy for the outsider to identify or define. The British Compressed Air Society, the UK trade association which celebrates its 50th anniversary today, divides its members' activities into five categories: industrial and process compressors; portable compressors and contractors' tools; industrial tools; pneumatic control equipment; and air treatment and transmission eqnipment.

Many of the BCAS members operate in two or more of these five categories and the dividing lines between them are not precise. Moreover, some of the companies which manufacture air compressors (wbether to supply compressed air within a plant or for process applications) are also involved in gas compressors, perbaps supplying machines for use in natural gas production or distribution or in chemical and petrochemical plants.

In a sense air compressors are part of a wider "compressor industry," but there is little in common between a large centrifugal compressor used as part of the prodnction process in an ethylene or ammonia plant and a small reciprocating compressor installed in a garage or workshop. Prodnct categories and market segments overlap with each other, but most companies bave narrowed down the markets which they intend to serve and hence the products which they manufacture.



A Joy TA60 turbo compressor is checked before its delivery recently to a British motor manufacturing plant, where it will provide power in the foundry

Competition

Ingersoll-Rand of the U.S. probably makes a wider range of air and gas compressors than any other company in the world; but its interests range far beyond compressors into pumps, gas turbines, needle bearings and other products. Its most important European competitor in the compressed air field, Atlas Copco, is more beavily committed to air compressors and related equipment. The same is true of the biggest British-owned company, Comp-Air.

But these three companies have to compete not only against other large, broadly-based concerns, such as Joy Manufacturing in the U.S. and Demag In Germany, but against smaller companies which have specialised in particular sectors of the business. In the UK two examples of such specialisation are Desoutter Brothers, in pneumatic tools, and Martonair International, in pneumatic control equipment.

Moreover, the technology is not static. As will ba explained in later articles in this survey, there is continuing competition between the three main compressor types — *reciprocating*, screw and centrifugal. Each of the three has its own advantages and the manufacturers are seeking to extend these advantages more widely into other sectors of the market.

The most dramatic illustration of the competitive impact which a new product can cause bas been the growth of the screw compressor during the post-war period. Originally developed by a Swedish research company, the screw compressor bas been exploited by a number of companies around the world. One of the most aggressive of these bas been Sullair of the U.S., which in the past 15 years bas come from nowbere to a stroog position In the American domestic market, challengiog for third place after Ingersoll-Rand and Joy Manufacturing.

The development of new and improved products is a necessary condition for success In the compressed air business. Researcb and engineering work is under way to overcome the disadvantages of compressed air, particularly noise, and to Improve the efficiency with which it converts energy into industrial power.

At the same time companies are investing fn related technologies, particularly electronics, which can enhance the performance of compressed air equipment. Tbis applies particularly to industrial tools and pneumatic control devices.

Improvemeots in performance, reliability and cost are all the more important at a time of sluggisb economic growth. In the UK several of the Industries which are important customers for compressed air equipmeot, such as construction, are ruoning at a low level and competition among the suppliers is fierce; In many cases a company can achieve growth in volume only by taking market share away from someone else.

Yet there is no lack of confidence about the long-term future of the compressed air industry—and even in the sbort-term some companies bave every intention of acbieving rates of growth well in excess of GNP. They are providing a product and a service which manufacturers and cootractors cannot do without; the technology may be mature, but the business opportunities are still there.

CONTENTS

Layman's guide to gas uses

WHAT ARE compressors for?

The purpose of gas compression is to deliver gas at a pressure higher than already existing. This may be done for a variety of reasons, such as:

- to transmit power, as in a compressed air system for operating pneumatic tools;
- to provide air for combustion, as in a jet engine
- to transport and distribute gas, as in natural gas pipelines and city gas distribution systems;
- to circulate a gas through a *process or system;*
- to produce conditions more conducive to a chemical reaction.

Air compressors versus gas compressors

Some companies describe themselves as manufacturers of air and gas compressors. Most air compressors are used to produce compressed air for power purposes, either within a factory or on construction and mining sites. Gas compressors normally handle process gases — in oil refineries, petrochemical plants, natural gas pipelines, etc. The distinction is not a rigid one, since air compressors may be used in the process industries to provide air for instrumentation (instrument air compressors) or for process applications, as in the pneumatic transport of cement and other bulk materials.

The same types of machine—reciprocating; rotary screw and centrifugal (see below)—may be used in both air and gas compressors, but the latter normally handle much bigger volumes and hence tend to be larger units.

Process gas compressors are produced by a variety of companies such as GHH and Demag in Germany; Nuovo Pignone in Italy; Sulzer in Switzerland; and in the U.S. Clark (subsidiary of Dresser Industries), Elliott (subsidiary of Carrier Corporation) and Ingersoll-Rand. In the UK Bryan Donkin (subsidiary of Hopkinsons Holdings) and Peter Brotherhood compete in certain areas of the market.

Several of these companies also compete in air compressors. Demag, for example, offers a wide range of standard plant air machines and is one of the market leaders in West Germany in portable compressors. Elliott, though primarily in the process field, also offers centrifugal compressors for the plant air market.

Volume, pressure and power

The volume of air or gas which a compressor can handle is expressed in cubic feet per minute (cfm). Most plant air compressors have a capacity of less than 2,000 cfm, whereas the biggest centrifugal compressors in process gas applications can handle capacities of up to 700,000 cfm. The pressure of the air or gas is measured in pounds per square inch (psi). The usual plant air compressor operates at 120-125 psi. The power to drive the compressor is obtained from an electric motor or an internal combustion engine; the horsepower required depends on the volume of gas to be handled.

What is "oil-free" air?

Where lubricated compressors are used, the air is polluted with some oil. This may be acceptable in many plant air applications — for example, where the air is used to power small hand tools — but some users, particularly in the food and pharmaceutical industries, require "oil-free" air. For this purpose "dry" or non-lubricated compressors are used.

Types of compressor

There are two basic types of compressor — positive displacement types and dynamic types. In the former the increase in pressure is obtained by enclosing a volume of gas in a confined space, then reducing it by mechanical action. Dynamic compressors are rotary, continuous-flow machines in which the rapidly rotating element accelerates the gas as it passes through the element.

The oldest and most common positive displacement machine is the reciprocating piston compressor, in which the compressing and displacing element is a piston having a reciprocating motion within a cylinder. Reciprocating compressors normally have self-acting valves; the design and quality *of the valves have an* important bearing on the performance of the compressor and on the cost of maintenance.

Periphery

The best-known of the dynamic types is the centrifugal compressor. In this machine the gas is fed to the centre of a rotating wheel with radial blades, known as the impeller, which throws the gas to the periphery by centrifugal force.

Other types of positive displacement compressor are the rotary vane compressor, the Roots blower and the liquid-ring compressor, while the dynamic category includes the axial flow compressor, the mixed flow compressor and the ejector. In the axial compressor the gas passes axially along the compressor through alternate rows of rotating and stationary blades which impart velocity and then pressure to the gas. Mixed flow compressors contain some of the characteristics of both centrifugal and axial flow compressors.

One of the major developments of the past 20 years has been the growing popularity of the rotary screw compressor, which, though a positive displacement machine, incorporates the entirely rotary action of a centrifugal compressor. Because it can operate at high shaft speeds, it combines high capacity with small size. It is easy to instal and has a low noise level. It has no valves and only two moving parts, the two counter-rotating rotors; thus the maintenance costs are low compared to the reciprocating compressor. The screw can be either a dry (oil-free) compressor or an oil-injected compressor.

The rotary screw compressor was invented by a Swedish research company, Svenska Rotor Maskiner Aktiebolag (SRM), which is the principal holder of the worldwide patents on the rotary screw method of compression. The technique was licensed by SRM to compressor makers around the world. Most of the major companies, such as Atlas Copco, Ingersoll-Rand, CompAir and Joy, now offer screw compressors as well as reciprocating compressors and, in some cases, centrifugal compressors. In the U.S. Sullair has based its rapid growth in the past 15 years entirely on the screw compressor.

The first screw licence was obtained by the Howden Group in the UK. Its subsidiary, Howden Compressors in Glasgow, has developed the screw in a number of ways, particularly compressors for industrial refrigeration (of which Howden claims to be the largest world supplier), oil-free compressors for petrochemical and process applications, and a range of plant air compressors. Howden granted a sub-licence to Holman Brothers, which merged in 1968 with Broom and Wade to form CompAir; this company manufactures a range of rotary screw compressors for stationary and portable applications.

Several of the big compressed air groups now offer reciprocating, screw and centrifugal compressors. All three can be used in standard plant air applications but each has its particular strengths and weaknesses. For small-volume applications, where the volume needed is below 100 cfm and the horse power required is 25 hp or less the reciprocating machine has tended to be the first choice—although the screw is increasingly competitive down to 70 cfm or lower. Between 100 and 1200 cfm, with horse powers ranging from 25 to 300 hp, the reciprocating and the screw machine compete against each other. Both types can be designed to handle much bigger volumes.

After 1200 cfm the centrifugal machine begins to compete in certain applications, but it is in bigger volumes, above 4000 cfm, where this machine comes into its own.

Manufacturers are continually seeking to extend the advantages of their particular machine into new sectors of the market.

Stationary versus portable compressors

Stationary compressors are normally installed within a factory to supply compressed air for operating pneumatic tools or controls, for conveying materials, for operating machinery such as paint spraying equipment, and many other purposes. They are described as plant air compressors or instrument air compressors and they are normally driven by an electric motor.

Portable compressors are used outside the factory, typically on construction sites and in connection with mining and tunnelling operations. They are normally driven by a diesel engine and they are used to power paving breakers and other contractors' tools, rock drills and other mining and tunnelling equipment. In some applications hydraulically powered machines compete with pneumatic tools.

Geoffrey Owen

Reliability the key to development

DEVELOPMENTS IN compressors and pneumatic equipment tend to be cautiously evolutionary rather than dramatic. The watchword is reliability, for in general the customer's plant and equipment being operated is likely to be substantially more expensive and so, therefore, is a breakdown.

No compressor or pneumatic equipment maker is keen to be accused of being responsible, through failure of his products, for expensive downtime. He seeks to build them for trouble-free operation over the ten to 15 years of the life of the machinery being operated.

The development of the petrol engine provides an analogy of evolutionary progress at considerable intervals, while buyers of pneumatic equipment, which delivers compressed air or gas to their processes, like to know that spares will be readily available over the life of the equipment and that if they want to instal another pneumatically-actuated machine they can count on the same spares and service routine.

This is not to say that research and development in the industry take a back seat. Rather that they are subordinated to the over-riding need for complete reliability. It is an emphasis that does not apply so strongly in soma other industries.

Whether, or when, to introduce a new product or range is largely a matter for individual judgment. Most equipment makers have, waiting in the wings, new or updated products that have already been extensively field tested following factory acceptance trials.

On the other hand there are periods and this is one of them, when shrinking markets or the need to respond to advancing process control technology brings new products forward on an unusually broad front.

Both factors are at work, and over the next two years one can expect to see major companies coming forward with new products, some of which will mark a radical change in design, and put an end to the comparative lack of innovation in recent years.

Steady

Since pneumatic tools were designed 30 or 40 years ago, the progress has been steady if unspectacular. In the past few years the energy crisis and inflation have meant that material and production costs have been rising—and so has the resistance of customers to increased prices.

In addition, the demand for better ergonomically-designed tools that are lighter, more comfortable to handle and are cushioned against vibration has been growing. Simultaneously, there has been a call for lower noise levels, echoed by increasingly stringent legislation.

Higher up the technological scale have been the tentative moves towards a paperless control of factory processes, and in this area, too, industry equipment leaders are ready or are preparing to launch new products designed around new machinery technology in which electronic controls, micro-processors, visual display units, and computers are beginning to transform the market place.

So the pressure for lighter low-cost equipment that is easier to handle, simpler to maintain and is in sympathy with the coming revolution in factory automation is really beginning to build up. Examples of what is happening, as is so frequently pointed out, are easily found in other countries, less easily here. It is heartening to note that international companies based in the UK are not just responding to the new requirements but in some instances are leading the technical field.

Protection

Equipment makers are assessing newer materials, such as plastics, which can be more cheaply formed, and lightweight ones such as aluminium and zinc diecastings to see how they can be used with advantage. Powder paint technology is also in evidence to improve protection against chipping.

One or two companies have re-organised their departments to give much more prominence to putting equipment on-line, linked in to computer-aided or controlled machines and processes. One of the first phases is likely to be in robotics. Although the UK lags behind other industrial countries in their use—about half the total are in the BL factory making the new Mini-Metro—no one doubts that the revolution is on its way.

One of the areas equipment makers are looking at is the "pick and place" operations in lightish component manufacture and assembly. Some of the new equipment coming along will be well in advance of robot installations here, but what leading manufacturers are *looking* at are world markets. About half, sometimes more, of production is sold competitively overseas.

The interface between electronics and air, to control equipment and improve the speed of its response, seems bound to grow. While in many instances equipment will be tapped in to a factory compressed air mains system supplied by big, outside compressors, the development of compact package units in which noise attentuation has been reduced to 60 DbA at one metre has opened up the alternative of individual units on the shop floor supplying adjacent machinery and processes.

This is a concept that appeals more particularly to smaller but expanding businesses. Like their big brothers the small compressors have automatic stop-start facilities to respond to changes in demand for air.

It is said that 10 per cent of the industrial electricity load is used to compress air for equipment. This gives some idea of the range of uses, some of which are outside, perhaps in a quarry for opening hopper doors, or in the harsh environment of a foundry.

Many pieces of equipment fail to get proper attention and servicing. Since the maker seldom knows where his equipment is going to operate he risks being blamed for breakdowns unless precautions are taken. One or two manufacturers, though by no means all, have tried to anticipate misuse not only by re-designing equipment in ways indicated above but also by the use of stainless steel piston rods as standard to prevent rusting.

At the other end of the scale there has been a move to introduce plastics and lightweight materials, though some argue that not only is there no performance advantage but no significant price advantage either. All the same, it is an area which manufacturers are keeping a keen eye on and, indeed, they use such plastics as nylon for tubing.

Plastic piping is largely taking over from metal piping for a growing list of applications and has led to the design of push-in fittings, adequate for working pressures up to 10 bars.

Advantage

This development has been paralleled by refinements that enable a valve to be disconnected and replaced without disturbing associated pipework. This is achieved by a sub-base valve comprising a valve module and a base module which the customer can assemble to form a complete valve unit.

The method has the added advantage of avoiding wrong reconnections, besides minimising downtime. The application of flexible nylon piping has immensely improved the prospects for pneumatic equipment being integrated into control circuitry, and the advent of micro-processors is considered to open up the market even more.

A number of leading manufacturers with worldwide markets to exploit — and defend — are heavily engaged on development work with micro-processors and sophisticated control machinery from the very simple to random access memory facilities. Solenoid valve technology is advancing to the point where a new type of non-lubricated valve should shortly be available, together with non-electric and non-magnetic automatic switching devices and ancillary equipment.

The race to seize the potential benefits offered by developments in control technology for pneumatic equipment is on. In the next two or three years customers will be able to buy a complete package down to the control panel.

Peter Cartwright

Strong competitive pressures in varied sectors

THERE ARE many hundreds of companies which participate in the compressed air industry. Some are large concerns which offer a broad spread of products and have an international network of manufacturing plants. Others specialise in a narrow segment of the business where they aim, by concentration of effort, to provide a better product and a better service than that of their larger rivals.

In virtually every segment there are enough companies to ensure that competitive pressures are strong. Profit margins in standard products tend to be low. Thus there is always an incentive to strive for improvements in manufacturing efficiency which will reduce the cost of the machine and for technical advances which will enhance its performance and reliability.

At one end of the industry in terms of size and diversity are the large international companies of which Ingersoll-Rand of the U.S. and Atlas Copco of Sweden are the two leading examples. These and a handful of other companies, including CompAir in the UK, make a range of stationary compressors for in-plant purposes.

Fillip

They make the industrial tools which are powered by those compressors. They make portable compressors for use in construction and mining—and the cutting and drilling equipment that goes with them. Some of them make process compressors, both air and gas. Some of them also manufacture pneumatic control equipment.

Atlas Copco has been making compressors, rock drills and pneumatic tools since the early years of the century. But it was the development of the "Swedish method" of rock drilling after the second world war—involving lightweight, self-feed drills, together with drill steels tipped with cemented tungsten carbide—that gave a great fillip to the company's growth.

For some years mining was by far the most important outlet for Atlas Copco equipment, but with the development of other products this has now been reduced to 20 per cent. Manufacturing industry accounts for 40 per cent of the business and civil engineering contractors for 35 per cent.

In many countries outside North America, Atlas Copco is the market leader. It is particularly strong in Western Europe, which accounts for 59 per cent of its business—including 15 per cent in Scandinavia. The company has been seeking to build up its position in North America; in 1977 it made an unsuccessful attempt to acquire Sullair the specialist in screw compressors.

Atlas Copco has invested heavily in manufacturing facilities outside Sweden and has sought to achieve economies of scale by specialising at each plant in a particular range of products. Thus most of the company's standard stationary and portable compressors are manufactured by Atlas Copco Airpower NV in Belgium. This is the principal source for Atlas Copco marketing companies in other parts of Europe, including the UK.

In the UK itself the Atlas Copco plant at Hemel Hempstead is the group's principal manufacturer of paving breakers and light rock drills for European and world markets. (Atlas Copco is "in surplus" on its UK exports and imports.) Heavier rock drills and industrial tools are made mainly in Scandinavia.

In the same way Ingersoll-Rand sales companies in Europe market products manufactured in several different locations. Standard compressors for the European market are made principally in the UK and in Italy, while certain special machines may be brought in from North America.

Three other major American companies—Joy Manufacturing, Gardner-Denver and Chicago Pneumatic Tool (which trades in the UK under the name Consolidated Pneumatic) compete in most products and in most markets. Joy, based in Pittsburg, is probably second to Ingersoll-Rand in the U.S. air compressor market and is a significant contender in Europe; it has a factory making a wide range of air compressors in East Kilbride, Scotland.

Like Ingersoll-Rand, it offers reciprocating, rotary screw and centrifugal compressors but air machinery represents only 28 per cent of its total sales. It makes mining equipment, air pollution control equipment, and other products.

Gardner-Denver also has a big commitment to mining and this company supplies specialised equipment used in exploration for oil, water and minerals. It has plants in the UK and in West Germany.

Last year Gardner-Denver was merged with Cooper Industries, one of the leading manufacturers of compressors for natural gas production and distribution. The effect of the merger is to produce a large, broadly-based engineering group with a comprehensive range of air and gas compressors.

Chicago Pneumatic Tool was incorporated in 1901 to exploit the development of air hammers which had been introduced to foundries in the U.S. and the UK in the latter part of the last century. It has traditionally derived a large proportion of its business from industrial tools, particularly those used in the motor industry and in automotive repair shops.

Competition in the so-called "after-market" has been extremely fierce. Japanese manufacturers have made big inroads in the U.S. and to some extent in Western Europe in this sector. But CP also makes and sells a full range of stationery and portable compressors and has diversified into other machinery and components.

Target

In 1967 it was the target of a takeover offer from Caterpillar Tractor, which wanted to add compressors to its line of construction equipment, but the deal foundered on anti-trust grounds. Chicago Pneumatic has two factories in Scotland making tools and another at Corby which manufactures the CP range of Single Screw portable and industrial compressors.

It was the international strength of these five companies—one Swedish and four American—that provided part of the rationale for the creation in 1968 of the British company, CompAir. Encouraged by the Industrial Reorganisation Corporation, this merger brought together two leading British compressor companies, Holman Brothers, based in Cornwall, and Broom and Wade, based in High Wycombe.

Holman Brothers was particularly strong in the mining industry and had the additional advantage of holding a sub-licence to manufacture the rotary screw compressor, which was clearly going to eat into the market served by the reciprocating piston machine.

Since the 1968 merger CompAir has steadily broadened its position both in products and in geographical spread. It has established itself as one of the six leading international companies in the field, as well as being the clear UK market leader in industrial plant air compressors and portables. Its acquisitions in the UK have included Reavell, making specialised marine and industrial compressors and centrifugal compressors for process work, and Hydrovane, making a distinctive range of light portable and stationary compressors based on the rotary vane principle.

CompAir moved into the U.S. in 1971 with the acquisition of Kellogg-American and has since made two *further* acquisitions in that country. In Europe it bought Compresseurs Luchard in France and has been building up its own marketing organisation in West Germany.

A challenge of a different sort to the international leaders came in 1965 with the formation in the U.S. of Sullair Corporation. The entrepreneurs in charge of this company were convinced that the rotary screw compressor—which had been on the market for some years but not energetically exploited—could provide the basis for an assault on the established companies.

Spectacular

Sullair's growth has been spectacular: between 1970 and 1978 sales rose from $11m to $103m and net income from $470,000 to $6.7m. Besides making portable compressors for construction and mining and stationary compressors for plant air, Sullair also makes industrial refrigeration screw compressors for the food industry and is developing gas compressors for petro-chemical and other process applications.

In Europe, Sullair has a plant in Germany which is jointly owned with Gutehoffnungshutte (GHH), the big German engineering group, and with Mr. Peter Dau, president of Sullair Europe. As in the U.S., it concentrates entirely on screw compressors and has no intention of diversifying into other types.

Sullair Europe has made a successful impact in West Germany, Austria and Switzerland and is planning to extend its business to other markets, including the UK.

There are other companies with strengths in particular sectors of the market. In the UK, for example, APE-Belliss, part of Amalgamated Power Engineering, concentrates on reciprocating compressors and is particularly strong in the medium and heavy-duty end of the market.

It has been notably successful in the offshore oil industry, where its compressors are used to supply service air on platforms and oil-free air for control and instrument air requirements.

In West Germany, Demag is a strong contender in most sectors of the compressor business. One of the French leaders is Maco Meudon, part of IBH, the construction equipment group.

Finally, there are the companies which do not maka air compressors, but specialise in the machinery and equipment that are powered by compressors. They compete against the big international companies on a narrow front, but often successfully.

In pneumatic tools there are specialists like Desoutter Brothers in the UK and Thor Power Tools of the U.S. In pneumatic control equipment there are companies like Martonair and Enots (part of IMI) in tha UK and Festo in Germany.

Yet another separata segment is air treatment and transmission equipment, where Norgren, a subsidiary of IMI, is one of the leading companies.

Another specialised application of compressed air is in surface treatment—for example, the spray painting of car bodies. Here again, although the major companies compete for the business, the lion's share tends to be won by specialists. The leading company is probably Devilbis, a subsidiary of Champion Spark Plug in the U.S.

G.O.

SOME MAJOR AIR COMPRESSOR MANUFACTURERS

(figures based on 1978 financial year)

INGERSOLL-RAND

Sales	$2,331m
After-tax profit	$133m
Number of employees	48,730

A diversified mechanical engineering company, Ingersoll-Rand is also a major producer of pumps, turbines, gas compressors, needle bearings, locks, vibratory compactors and other products.

ATLAS COPCO

Sales	$1,107m
After-tax profit	$34m
Number of employees	17,660

With its headquarters in Sweden, Atlas Copco is an international company with its business based mainly on compressed air. It has diversified into hydraulic components and hydraulic drilling equipment. (Figures converted from Swedish Kronor at the rate of $1=SKr 4.285).

JOY MANUFACTURING

Sales	$714m
After-tax profit	$39m
Number of employees	12,550

Joy's two operating subsidiaries are Joy Machinery, making mainly mining equipment based on pneumatic and hydraulic power, and Joy Industrial Equipment, making fans, filters, electrical connectors and a variety of equipment for the oil industry.

GARDNER-DENVER

Sales	$652m
After-tax profit	$51m
Number of employees	12,650

Gardner-Denver makes construction and mining machinery, industrial compressors and tools, and equipment for oil and general exploration. Last year it merged with Cooper Industries, a leading manufacturer of engines and gas compressors for the oil and gas industries.

CHICAGO PNEUMATIC TOOL

Sales	$377m
After-tax profits	$21m
Number of employees	9,220

This company, which trades in the UK as Consolidated Pneumatic, makes a wide range of pneumatic tools and air compressors and has diversified by acquisition into instruments, including temperature recorders and controls.

COMPAIR

Sales	£147m
After-tax profits	£6.2m
Number of employees	8,000

CompAir, the leading British compressed air group, makes a wide range of industrial plant air compressors, power tools, portable compressors and contractors' plant, rock-drilling equipment, pneumatic and hydraulic controls.

Lowering a cylinder top cover during the construction of a large three-stage, three-cylinder compressor at the Birmingham works of APE-Belliss

Loyalties to compressor types

TALK TO APE-Belliss in Birmingham about plant air compressors and you will hear a powerful case for the reciprocating machine. "The reciprocating compressor" says the company, which has been building them for the past 75 years, "still has unparalleled efficiency as compared with rotary types, all of which show a 20 per cent or worse shortfall on running costs — a factor which can only strengthen the market position of the reciprocating machine as worldwide power costs continue to rise."

APE-Belliss, formerly Belliss and Morcom and since 1968 a subsidiary of Amalgamated Power Engineering, is best known as a producer of medium and heavy-duty compressors. It has a large share of the UK market in the 1000-2000 cfm range. Although it has been extending its range downwards — it now offers mechines with 300 cfm and 500 cfm capacity — it doea not make smell plant air compressors nor does it compete in portables. Being wholly committed to reciprocating compressors, the compeny devotes a great deal of effort to improving their performance. It bas made a particular specialisation of the manufacture of oil-free compressors for instrument air and process air applications.

Its reputation as a supplier of rugged and reliable machines has been enhanced by its success in supplying air power to offshore platforms. APE-Belliss has supplied more then 70 compressed air modules for the North Sea. These machines are capable of operating continuously in all weather conditions while providing oil-free air for instrumentation and control purposes.

For a different perspective on the industry talk to Mr. Peter Dau, president of Sullair Europe, the European effiliate of the fast-growing American company. Sullair is wholly committed to the rotary screw compressor, starting with portables and then moving in the late 1960s into the stationary plant air market.

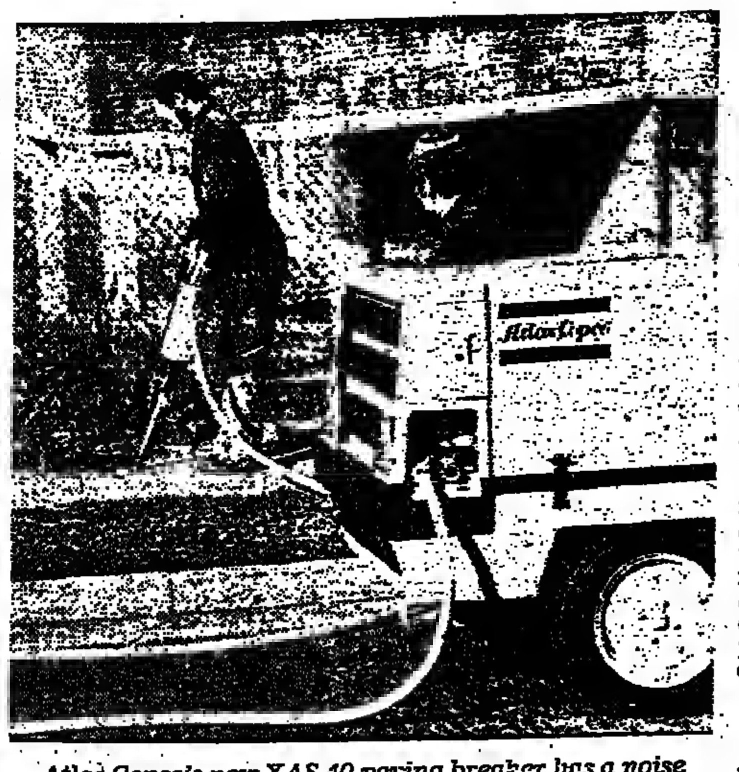
Mr. Dau attributes much of Sullair's success to the entrepreneurial drive of its management team, but he argues that the company's dedication to the screw machine has been a big asset. He suggests that companies which took on the screw as a supplement to their established reciprocating machines were reluctant to push it too hard because they were afraid of losing the spares business associated with reciprocating compressors. The screw compressor, having very few moving parts, has low maintenance costs and a low spares requirement.

Sullair has been seeking to extend the capabilities of the screw both upwards and downwards—below 50 cfm where it is competing in the mass market for piston compressors, and above 2,000 cfm where it is up against the centrifugal machine. At present the screw is too expensive for the low-volume end of the market but Sullair is working on new rotor designs which could make it competitive in the 10-15 cfm area. Sullair is convinced that for et least the next ten years there will be plenty of scope for enlarging the role of the screw compressor in the plant air market.

To complete the picture of the three main competing types of machine, Ingersoll-Rand claims that its Centac line of centrifugal compressors has shown as impressive a growth in the plant air market as has Sullair's screw compressor. First introduced in 1966, the Centac compressor covers a range from 1250 to 15,000 cfm. Where large volumes of oil-free air are required for continuous-duty operation, the Centac is a strong contender.

Choice

Unlike Sullair and APE-Bellis, Ingersoll-Rand is in a position to offer customers a choice of reciprocating, rotery screw and centrifugal machines. (APE-Bellis does market centrifugal air compressors for epplications over 2000 cfm, but these machines are made by Dresser-Clark.) Thus it can claim to provide the customer with exactly the package which suits his requirements; it does not have to push one particular design or type of machine.


Atlas Copco's new XAS 40 paving breaker has a noise output of 75 decibels, to conform to many local authorities' regulations

Joy Manufacturing, one of Ingersoll-Rand's strongest rivals in the U.S. domestic market, is in a similar position. It makes reciprocating compressors, which are designed to handle volumes between 80 cfm and 1100 cfm, screw compressors (90 cfm to 590 cfm) end centrifugal or "turbo" compressors (1750 cfm to 35,000 cfm). The centrifugal machines, which produce oil-free air, are widely used in the petrochemical and process industries, but the company sees a trend towards the edoption of packaged turbo-compressors for the provision of plant air: the reliability end low maintenence requirements of the units offset their higher capital cost.

"It will always be a matter for debate whether the advantages of offering a broad line of products outweigh the benefits which companies like APE-Bellis and Sullair derive from specialisation. CompAir, the leading British-owned group, has sought by acquisition and by internal development to extend its range of products and thus serve most sectors of the market—though it does not venture into the very high volume process applications.

Its BroomWade line of compressors for general industrial use includes small machines with outputs between 2.5 and 85 cfm end heavy-duty mechines delivering standard or oil-free air in outputs up to 3,260 cfm. At the top end CompAir's Reavell subsidiary makes high-pressure (4,500 psi) reciprocating piston machines es well as centrifugal compressors with capacities up to 100,000 cubic metres per hour.

Similarly Atlas Copco, though it does not manufacture a centrifugal compressor, covers a very wide spectrum with its reciprocating end rotary screw machines. These range from the small Airlet machines with e minimum capacity of 4 cfm to the ZR compressed air plants producing up to 12,000 cfm of oil-free air. The top-of-the-line ZR8 machine, which is an oil-free rotary screw compressor, is in some applications e direct competitor to a centifugal compresser such es Ingersoll-Rand's Centac machine.

One of the reasons why the industry affords opportunities both for the specialist and for the broad-line supplier is that the choice of an air compressor, except perhaps at the bottom end of the market (small machines for the garage and repair shop), is not a simple matter. Each customer has his own particular requirements.

His choice of compressor will depend on what the air is used for, whether it needs to be completely oil-free, whether cooling water is available, whether there are special noise requirements, whether the demand for compressed air is regular or intermittent and so on. These requirements can be satisfied in different ways by different machines and it is not simply a matter of buying the cheapest compressor available; like other capital goods, compressed air plants are sold by engineers to engineers.

Delegate

The service back-up which the manufacturer can provide is also of vital importance. Atlas Copco has traditionally followed the policy of dealing direct with the customer (though it is making greater use of distributors in some segments of the market) and in the UK the front line of its sales and eervice operation consists of its 11 compressed air centres. It has recently introduced a new "Serviceplan" scheme, whereby users of Atlas Copco screw compressors can delegate to the manufacturer full responsibility for maintenance and repair under a fixed price agreement for up to 10 years.

Chicago Pneumatic has recently introduced its single screw compressors in the UK, backed by a three year warranty. CP is offering a 24-hour, seven days a week breakdown service on the compressor unit. The new machine is being assembled at a new factory in Corby, with the air ends made at another UK factory at Fraserburgh, Aberdeenshire; the first two models in the range produce 140 cfm and 185 cfm. The single screw is a development of the rotary screw technology on which several companies are working.

With the market in the UK growing slowly if at all, manufacturers have to find new ways of attracting business, either by improving the product or by superior after-sales service. There is little they can do to enlarge the market itself, although new opportunities can sometimes be seized. For example, Atlas Copco has developed a useful business in supplying portable compressors as standby units for industrial epplications. The PT series of oil-free rotary screw compressors, with capacities from 900 cfm to 1,500 cfm, is particularly suitable for this application. They are normally supplied through plant hire companies, for whom the industrial standby market is particularly valuable at a time of depressed activity in the construction industry.

Both in portable compressors for construction and mining and in plant air compressors the industry's capacity is likely to be in excess of demand for some time to come. Perhaps the most positive element in the market is that users, particularly large users in such fields as vehicle manufacture and the food industry, are becoming more demanding in the quality of compressed air and the efficiency with which it is supplied. This puts an even bigger premium on product development and improved technical performance. Those companies which can spread their development costs over e large volume of business may enjoy an advantage.

G.O.

PROFILE: Ingersoll-Rand

Broader product range

INGERSOLL-RAND is the leading supplier of air compressors in the U.S. and has a strong position in the international market. In Europe it has manufacturing fecilities in the UK and in Italy and is a major contender in most segments of the business.

Unlike its principal European competitor Atlas Copco of Sweden, Ingersoll-Rand has broadened its product range to include gas compressors for natural gas production and transport, petro-chemical plants and other process epplications. It is a diversified mechanical engineering concern, with important interests in pumps, needle bearings, gas turbines, locks and other machinery lines.

Yet compressed air was a key technology for Ingersoll-Rand when the company was taking shape in the early years of the century and it remains a substantial part of its business. The earliest products were rock drills used for construction work on Manhattan Island and this led to the development of e range of air compressors and pneumatic tools.

It was rock drilling which first took Ingersoll-Rand into overseas markets: as new mining ventures became established, demand for pumps and compressors followed. At the same time the exploitation of natural gas in the U.S. brought the company into process compressors.

Ingersoll-Rand now has a broader range of compressors, than any of its rivals. In stationary and portable air compressors, for example, it can offer reciprocating, screw and centrifugal machines, ranging from 10 to 15,000 horsepower. On the process side there are centrifugal and axial-flow units with capacities up to 700,000 cfm. But because of its interests in pumps, bearings and other products, the company is not over-dependent on any one product or market segment.

Although he recognises the advantages of specialisation, Mr. William Wearly, chairman and chief executive officer, is convinced that Ingersoll-Rand's diversity is a source of strength. "We must carry on a large and consistent programme of research and development," he says, "and that means we must have e stable, reliable base load of operations. Each one of the markets we eerve is cyclical, but we have diversified enough to maintain a steady flow of business."

One example of new product development which was influenced by Ingersoll-Rand's broad range of activities was the Centac centrifugal compressor. It is a high-speed machine using some of the same technology as jet engines, requiring edvanced metallurgy and sophisticated machining techniques.

Used as a plant air compressor, it produces a lot of air with minimum vibration and in a compact configuration; it is especially suitable for high-volume applications as in the motor industry. The Centac line was a way of using the technology developed for high-volume process applications in the plant air field.

Despite the growth of rival technologies Mr. Wearly is confident that compressed air will offer plenty of opportunities in the years to come. He accepts that in rock drilling, for example, "you can put more energy into a drill with hydraulic power." Hydraulics will make inroads in the drilling business, but he points out that hydraulic machinery is sensitive — "requiring almost as much maintenance as an aircraft—and people are used to pretty rough and ready methods in mining and construction."

Any losses which compressed air may suffer in this market can be made up in other fields. For example, Ingersoll-Rand has developed a very substantial business in soot blowers for coal-fired power stetions — a market in which the company has moved rapidly to a dominant market share.

Attraction

Will Ingersoll-Rand diversify even further? "We will want to broaden our base somewhat by acquisition," says Mr. Wearley, "but we will stay mainly in the mechanical engineering business." The aim is not diversification for the sake of it, but to find products and markets where Ingersoll-Rand can be a major force.

"We want to be very important in the things we do, preferably market leader or no worse than No. 2." That was the attraction of Torrington, the world leader in needle bearings, a business which Ingersoll-Rand knew and understood.

At the same time Mr. Wearly intends to push internal development as strongly as possible. Although most of Ingersoll-Rand's businesses and technologies can be described as mature, the company stends to be one of the major beneficiaries from the enormous increase in energy investment likely to take place over the next few years. There will be demand for pumps, compressors and other Ingersoll-Rand equipment in oil and gas production, oil refining and gas processing, coal mining and electricity generation.

In 1978 Ingersoll-Rand spent $64m on capital investment and $82m on research, engineering and development. New products, some of them based on compressed air, will play an increasing part in the company's drive to enlarge its share of world markets.

G.O.

Safety and cost unmatched in industrial uses

AIR-OPERATED tools for use within a factory cover a wide spread of applications. They range from the sophisticated multi-spindle installation on a car assembly line to the simple screw drivers and nut runners used in garages and vehicle repair shops. In the manufacture of vehicles, components and other high-volume assembly industries there is a move towards greater automation and complexity, leading to orders for fully engineered assembly systems rather than discrete assembly tools; these orders might be valued at several hundred thousand pounds. But the great majority of industrial customers continues to order pneumatic tools in much smaller quantities—say a few dozen a year—and this is the bread-and-butter of the tool suppliers' business.

It is the replacement of manual effort by power-assisted machines in assembly-type operations which has been the basis for the growth of pneumatic tools. Their safety, reliability and relatively low cost represent advantages which for most applications cannot be matched by any other sort of tool.

Single-minded

The broad-line compressed air companies are major suppliers of industrial tools. Yet there appear to be no overwhelming advantages in being able to offer both the compressor and the tools; most users purchase the two types of equipment separately. In the UK the market leader is Desoutter Brothers, an independent company which does not manufacture its own compressors. It has devoted itself single-mindedly to pneumatic industrial tools; it is believed to have about 40 per cent of the UK market and perhaps 12 per cent of the EEC market excluding the UK.

Another important contender which does not make its own compressors is Thor, part of the the American-owned Stewart-Warner Corporation. Thor, which has a UK factory at Tynemouth, makes a wide range of electric and pneumatic tools which includes impact wrenches, grinders, nut setters, screw-drivers, hoists and suspension balancers.

Other major competitors in the UK market include Ingersoll-Rand, Atlas Copco, Chicago Pneumatic Tool, CompAir, Gardner-Denver and Aro. Most of these companies compete internationally, but the major European countries have their own national companies which have a substantial share of the business.

A new source of competition in the last few years has been Japan, whose manufacturers have hit hard at the high-volume, low-priced end of the trade, particularly the garage after-market. Chicago Pneumatic Tool, which has traditionally been the leader in this market, has felt the brunt of low-cost competition. In his annual statement to shareholders last year the president of the company, Mr. Thomas Latimer, commented: "In auto service tools the established U.S. manufacturers have faced a large volume of imports at low prices, several of which were copies of CP tools. Some have cut back production or left the business in favour of importers and CP."

Mr. Latimer commented that the change in the yen/dollar relationship had helped to correct the situation and that profit margins had "modestly improved." Nevertheless, Japanese-made tools continue to be a significant factor at this end of the market, in Europe as well as in the U.S. Most of the major European and American companies market some tools which are wholly or partly Japanese in origin.

The erosion of profit margins at the bottom end of the market has provided an extra incentive for companies to go for products of higher added value. There is an important difference between the heavy-duty or industrial market and the light-duty or garage market, involving different tolerances and different manufacturing techniques. Within the industrial market the major companies are seeking to achieve a technological edge over their rivals. Atlas Copco, for instance, has moved strongly into multi-tool installations, especially for the motor industry; a recent large order was for the new Ford engine plant in South Wales.

Similarly Thor has developed its PAR system which combines an air-driven nut setter with an electronic module; this monitors the torque being applied to the fastener and automatically shuts off the tool when specified limits of torque and tension have been reached.

Tools have had to be redesigned and made quieter to meet new noise requirements. The interval between major new product introductions has been shortened. Electronic controls are playing a bigger part in the business. As in other parts of the industry, the application of electronics to compressed air power has become an essential element in the major companies' product strategy.

In contractors' tools and mining equipment the same trend towards higher performance and greater sophistication is apparent, but here the compressed air industry has had to contend with the inroads of a rival technology — hydraulics. Hydraulic systems provide a more efficient method than compressed air for transmitting power; they have a higher output in relation to their size and they are easier to silence. On the negative side they are more sensitive than compressed air systems. Their maintenance costs are higher and they are less suitable for operation in dirty environments where contamination can damage the components and cause breakdowns. Nevertheless, it has been clear for some years that hydraulically powered equipment would play an increasing part in mining and construction; hence the compressed air specialists have had to adjust to the competition, usually by joining it.

Reputation

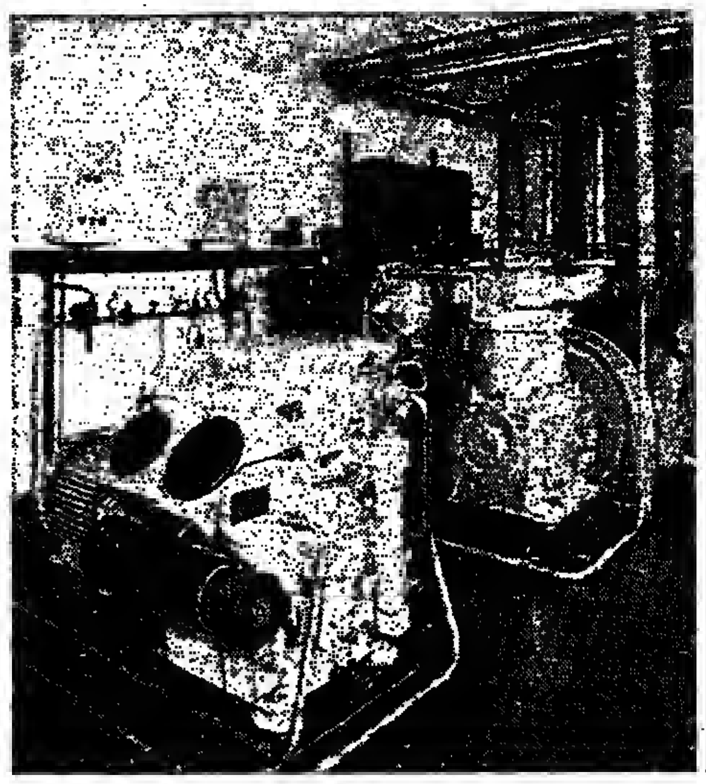
CompAir's Holman range of hard-rock drilling equipment has enjoyed a high reputation in mines and quarries for nearly a century. But CompAir needed to supplement Holman's compressed air technology with an involvement in hydraulics. So a long-term agreement was negotiated with a Finnish company, Tamrock, whereby CompAir companies would market its mechanised underground rock-drilling rigs in key territories outside Scandinavia and the Comecon area. In this way the British group has not only protected its flank against the growth of hydraulics but, more positively, gained access to the know-how and development resources of a successful specialist in the application of hydraulics to mining.

Atlas Copco has made a large investment in developing its own range of hydraulic components and machinery. One of its subsidiaries, Monsun-Tison, is responsible for the development and manufacture of both pneumatic and hydraulic components and systems; it supplies hydraulic components both to outside customers, such as mobile crane manufacturers, and for use in Atlas Copco equipment.

Atlas Copco MCT, the subsidiary responsible for mining and construction equipment, has been making strenuous efforts to establish a position of market leadership in hydraulic rock drilling, especially in the U.S. A new series of hydraulic drills, mounted on rigs, have been developed both for underground and surface drilling. The importance Atlas Copco attaches both to this side of its activities and to the U.S. market is reflected in tha recent acquisition of Jarva in the U.S., a specialist in full-face tunnelling techniques.

Despite the growth of hydraulics there will still be a substantial demand for pneumatically-operated equipment such as paving breakers and other contractors' tools. Apart from Desoutter, most of the leading industrial tool manufacturers are also prominent in contractors' tools, with Thor, in particular, holding a strong market position. In this business there probably are some marketing advantages for a company which can offer both portable compressors and the tools which are designed to match them; in the UK the plant hire companies are important distribution channels for both types of equipment. Companies like Thor and John Macdonald, which do not make their own compressors, have to convince the customer that their machines offer advantages in performance and reliability over what is available from their "integrated" rivals.

G.O.



This CompAir Reavell VHP36 compressor at McKechnie Metals works at Aldridge, Staffs, is used for charging accumulators

PROFILE: Desoutter Brothers

Decision to resist takeover

MR. ROGER DESOUTTER, chairman of Desoutter Brothers, believes that his company can do a better job for its customers and shareholders by staying independent and by concentrating single-mindedly on the manufacture and sale of pneumatic power tools for industry.

That was the argument against the take-over bid from CompAir in 1976. The bid was entirely logical from CompAir's point of view: it saw the acquisition of Desoutter as a means of greatly enlarging the volume of its industrial tools sales and thus of strengthening an important segment of its business. At the same time it argued that Desoutter would benefit from the bigger financial and technical resources available to a larger group.

Desoutter, aided by the substantial family shareholdings, successfully fought off the bid. Its performance in the next two years certainly seemed to justify the argument for independence. Pre-tax profits rose from £1.7m in 1975 to £2.6m in 1976 and £3.8m in 1977, before slipping slightly to £3.4m in 1978.

The outcome of the CompAir bid has reinforced the management's conviction that the strategy of independence and specialisation is the correct one. Other big companies in the compressed air business continue to look enviously at Desoutter's volume and market share and wonder whether one day the company will prefer the security of being in a larger group.

The company was founded in 1914 as a partnership manufacturing artificial limbs. Later the business was extended to make and sell a pneumatically-operated hand drill which originally had been developed for the company's own use. Desoutter Brothers became a pioneer in pneumatic industrial tools which proved to be ideally suited for eliminating or reducing manual effort in a wide variety of manufacturing and assembly industries.

After the second world war the manufacture of artificial limbs was discontinued. Since then the tendency has been for Desoutter to become more specialised rather than less. It has, for example, gradually phased out production of electric tools which in the 1930s represented as much as 50 per cent of sales.

In the late 1950s Desoutter ventured into pneumatic controls with the purchase of Lang, but the management found that it could not devote sufficient attention or investment to a product which was different in manufacturing and marketing techniques from industrial tools. In 1972 Lang was sold to Sperry Rand, which was looking for a pneumatic controls business to complement its strong position in hydraulics.

Desoutter has always believed in close contact with the customer. All but about 5 per cent of its tools are sold direct to the user, not through distributors. Desoutter's sales engineers, based at the company's headquarters in London or at branches in Birmingham and Manchester, provide the vital link with the many thousands of industrial customers. (Desoutter is only concerned with tools for use within the factory; it does not manufacture contractors' tools, unlike most of its competitors.)

Willingness

In the UK industrial market Desoutter has an estimated 40 per cent of the business, while in the garage trade or "after-market" it reckons to be in second place behind Chicago Pneumatic Tool. By far the largest part of the company's business is in industrial tools, which are handled by the Desoutter Ltd. subsidiary. A separate subsidiary, Desoutter Automotive, serves the garage trade.

Although most of Desoutter's tools are standard products—or at least built up from standard components—it seeks to reinforce its service to the customer by a willingness to make "specials" or "semi-specials."

One of the keys to Desoutter's ability to retain its large share of the market lies in the volume of its production. While at the top end of the market—the sophisticated multi-tool installations required by the motor manufacturers—price may not be the determining factor, it is important in the regular industrial business which provides the bulk of Desoutter's turnover.

Desoutter has a bigger scale of production than any of its competitors in the UK and probably in Europe. It has two factories in North London and another at Angmering in Sussex which is being developed to handle the larger batches on a flow-line basis. There is also a small factory in West Germany making special purpose tooling.

Keeping the batch sizes up and the costs down is a constant priority; new automatic profiling machines are being installed in the main London factory to increase the speed and accuracy of machining operations.

Like its fellow specialist Martonair, Desoutter Brothers was early to see the need to develop sales in Continental Europe. The German subsidiary was formed in 1963 and the company also has subsidiaries in Italy and Austria. Desoutter reckons to have about 18 per cent of the German market and 12 per cent of the total EEC market excluding the UK.

The same approach to selling is followed as in the UK, through the company's own sales engineers. Exports amounted to just over £7.3m in 1978 and overseas business represented nearly two-thirds of the company's total turnover of £19.6m. Western Europe is easily the most important outlet, but the company has a subsidiary in the U.S. and is gradually building up its sales there.

G.O.

COMPRESSED AIR INDUSTRY VI

Pneumatic controls

IN THE general excitement about the "micro-chip" revolution it is sometimes forgotten that for many manufacturing processes pneumatic controls still provide the most effective and most appropriate form of automation. Compressed air was first used to move or clamp workpieces in machining operations, but pneumatic systems have since been extended to a very wide range of manufacturing activities—particularly where labour is being osed to move, hold or form material repetitively.

The "muscle" of the system is the cylinder, which converts the energy in compressed air into mechanical work; a typical application is to lift and transfer material from one conveyor to another et different levels. The cylinder is the actuator which drives the system. The other key components are the directional control valves which distribute air to the cylinder and the sensor which supervises the operation of each work cycle.

Thus pneumatic controls consist of a kit of components which can he fitted together in a variety of ways to suit a particular manufacturing operation. They provide low-cost automation and have the further advantage of being able to withstand a wide range of temperatures and environmental conditions: the equipment is rugged aod durable.

During the post-war period a substantial industry has grown up to manufacture and market pneumatic controls. In tha UK, and probably in Western Europe as a whole, the leading company is Martonair. Its principal challengers in the UK market are all subsidiaries of larger groups. One is Enots, based in Lichfield, which since 1971 has been e subsidiary of IMI (formerly Imperial Metal Industries) and is now one of e number of companies that make up IMI's fluid power group. IMI Enots makes a wide range of cylinders and valves for pneumatic control purposes; it also has a separate and substantial business in compression tube fittings used in pneumatic circuits.

Leader

Another is Schrader Bellows, a subsidiary of Scovill, the U.S. engineering group. It is the leader in the U.S. market: its UK factory is at Cannock in Staffordshire. A third major contender is Maxam, part of CompAir, with plants in Cornwall and et Uxbridge making cylinders, valves and other components. Lang, based in Telford, was acquired by Sperry Rand in 1972 and forms part of the Sperry Vickers division: Lang's pneumatic controls and systems were seen as complementary to the Sperry Vicker's strong world position in hydraulics. Another major U.S. owned manufacturer of fluid power components and systems is Parker Hannifin.

There are numerous smaller companies in the field. Some of the big compressed air groups also manufacture pneumatic components both for their own use and for outside sale. Atlas Copco's Monsun-Tison subsidiary sells hydraulic components under its own name and pneumatic equipment under the Atlas Copco name.

About half the business consists of sales to OEM (original equipment manufacturers) customers. They incorporate the pneumatic controls into their own equipment — say a packing machine or a conveyor, or e mixing machine—which is then sold to end-product manufacturers. The other half consists of sales made direct to the end-user.

Close contact with both sorts of customer is essential, not only to ensure adequate spares and service support but to provide continuing technical advice.

Some people in the business believe that the market for pneumatic controls may have matured in the past few years. The suggestion is that the manufacturers enjoyed impressive growth rates in the 1950s and 1960s but now that the most obvious opportunities have been exploited and other forms of mechanisation and automation are gaining ground, the industry will have to content itself with an increase in demand tied more closely to the state of the economy.

It is true that the newer branch of the "fluid power" industry—hydraulics—is growing faster than pneumatics. Where higher power is required hydraulic components have clear advantages. Yet Martonair in particular does not share the view that the pneumatic controls business has matured.

Competition

This company argues that hydraulics serves a different market and is not e direct competitor; there is a small overlap at the bottom end of hydraulics and the top end of pneumatics. Some companies, such as Sperry Vickers and Parker Hannifin, make both hydraulic and pneumatic systems. Martonair itself is on the fringes of the hydraulics business—it makes and sells its own hydraulic cylinders in Germany—but sees no way of competing against the established makers of hydraulic pumps and valves. It sees ample scope for growth in its own area of specialisation.

Pneumatic control remains e simple and economical means of taking the skill and labour out of manufacturing operations within the factory. If pneumatics is adequate to do the job, there is no reason to turn to hydraulic systems, which cost more and have more complicated valving and higher running costs.

G.O.

Treatment equipment snags

THE EFFICIENCY of a compressed air system can be seriously impaired if there is too much water in the air or if impurities are allowed to clog the system. Hence compressed air filters are needed to separate water and unwanted particles from the compressed air.

Another problem is that changes in the air consumption and variations in compressor pressure can impose strains on the system, causing unnecessary wear on the components and reducing the performance to unacceptable levels. To deal with this problem it is normally necessary to install pressure regulators to reduce the high variable primary pressure to a lower constant secondary pressure adapted to the needs of the working unit.

The compressed air system needs efficient internal lubrication to avoid corrosion and wear on the components. Direct lubricators are normally installed to ensure thet the exact amount of oil required is dispensed at the right item.

These three items of equipment—filters, pressure regulators, and lubricators—form part of another segment within the compressed air industry, the manufacture of air-treatment and transmission equipment.

Specialise

As in most other branches of the industry, the major companies have an important stake in this part of the business. CompAir, for example, acquired in 1978 a U.S. business, Watts Fluid Power, which specialises in the manufacture of filters, pressure regulators and lubricators. This company, based in Maine, also has interests in Canada, the UK and West Germany, as well as a joint venture in Japan.

Yet it is a specialised sector of tha compressed air industry and the specialists have a substantial share of the market. IMI Norgren, which like IMI Enots is part of IMI's fluid power group, claims to be the world's largest supplier of filters, regulators and lubricators for compressed air systems and for the protection of compressed air equipmeot.

IMI saw in fluid power a sector of the engineering industry which was likely to grow considerably faster than average. It has coocentrated particularly oo the compooents which are used between the compressor aod air receiver at one end and the air tools at the other. Enots is a well-established manufacturer of valves and cylinders, while Norgren is an acknowledged brand leader in air treatment equipment with its "plug-in" range of filters, regulators and lubricators. Norgren International, formed in 1973, looks after sales of IMI fluid powec products io Europe and administers IMI's own network of pneumatic stockists in the UK. The American company, C. A. Norgren, based in Colorado, is one of the leading manufacturers of pneumatic equipment in the U.S.

Other companies which specialise in air treatment and transmission equipment include Denco Miller and Deltech in refrigeration compressed air drying equipment, and Durapipe in plastic pipe and fittings.

G.O.

PROFILE: Martonair International

A strong share of market

MR. C. D. P. SMALLPEICE, the founder of Martonair International, was a machine tool man and one of the first to see how poeumatic controls could improve the performance of machine tools.

He founded the company in 1949 — it was named after Marton, near Rugby, the town to which Smallpeice's business had been evacuated during the 1939-45 war—and he soon realised that pneumatic controls would have applications far beyond the machine tool industry.

After selling his machioe tool business to Alfred Herbert, Smallpeice began to find customers for pneumatic controls in a variety of industries, especially where repetitive operations were being carried out by hand. H. J. Heinz was an early customer and the car manufacturers hegan to use air hoists for haodling eogines on their assembly lines.

Thus Martonair was present at the birth of the pneumatic cootrols industry and it made good use of its early start. In June 1950 a subsidiary in Holland was set up, the first venture in Continental Europe, and in 1956 Martooair took the important decision to go into Germany—a market which now accounts for about 25 per cent of total turnover and profit.

"At that time the Germans were not very automated," says Mr. Ronald Cartwright, Martonair's chairman and managing director, "but they took to it very quickly and the market is now much bigger than that of the UK."

It was its determination to expand in Europe which helped to give Martonair its wide spread of customers and, most important of all, its volume of production—two factors which have enabled the company to maintain its position of leadership in the business.

With the volume that Martonair now enjoys, it is not at all easy for its rivals, let alone newcomers to the industry, to eat into its share of the business. In geoeral, it does not rely greatly on patent protection, but it has a wide range of products which is being steadily improved and expanded. If the customer is an OEM (original equipment manufacturer) and Martooair valves and cylinders are designed into his product, only a serious failure on the part of the supplier will cause him to switch to another producer.

Martonair supplies its overseas customers partly through direct exports from the U.K., partly through local manufacture. In Germany, for instance, there is a staff of about 350 people engaged in manufacture, engineeriog and sales. About 60 per cent of Martooair's sales in Germany are of locally-manufactured products.

Most of Martonair's international competitors are subsidiaries of larger and more diverse organisations. Mr. Cartwright believes that specialisation has heen an important source of strength for Martonair. Its growth has been mainly organic, with acquisitions playing a small role. It has not sought to huy up rival pneumatic control manufacturers, because their products would duplicate its own. It has been reluctant to diversify, except into areas which are complementary to its established pneumatic controls business.

Long life

Thus in 1978 Martonair acquired Anstin Beech, a specialised manufacturer of pneumatic metal-to-metal, spool-to-sleeve valves. These are specialised products used in high-volume applications (such as food processing and packaging) where reliability and long life are essential under difficult working conditions.

Althoogh more than two thirds of Martonair's sales come from Continental Europe, in the last few years steps have been taken to strengthen the UK sales organisation which had been somewhat neglected in the drive for overseas business; new branches have heen set up and a more intensive sales programme launched. In the year to July 31, 1979, Martonair reported pre-tax profits of £5.7m on sales of £36m, compared with £5m and £30m respectively in the previous year.

One huge market in which Martonair at present has a very small share is the U.S., although the Canadian subsidiary does some business there. A frontal assault on the established American manufacturers is not contemplated, but Martonair is examining ways in which it can provide a more effective service to its OEM customers in Europe many of whom have machinery and equipment operating in the U.S.

G.O.

THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

Enterprise agencies grow through UK

BY JOHN ELLIOTT

THE IDEA of small businesses being helped with their technical, financial and other problems by large companies appears to be developing into a useful service, according to reports from the London Enterprise Agency, which was set up last April.

Similar projects are also being developed in Manchester, Birmingham and Leeds, and are being considered in Bristol and Liverpool. In some cases these initiatives involve large companies assisting with regional development, including regenerating inner city areas, as well as simply helping small firms.

The London Agency was created by nine large companies and the London Chamber of Commerce to channel help to small businesses. It has now processed several hundred routine inquiries as well as handling 40 or more substantial cases and organising conferences and courses.

One particular discovery has been an increasing interest *among large firms in spinning* off unwanted subsidiaries to employees, who then run them in their own right as independent businesses.

This is not a new idea, but the London Agency reports that a number of large companies have developed a fresh interest in the possibility.

Examples of activities hived off in this way include a market research consultancy, two printing businesses, and an office *cleaning service*.

In each case the business was peripheral to the large company's main operations and should now be more effectively developed by its new owners, who are often given the initial security of a long-term contract from their former employer.

The main work of the London Agency has been helping small businesses with a wide range of problems, using the managerial resources of its nine backers—Barclays Bank, Midland Bank, the Industrial and Commercial Finance Corporation, BP, GEC, Shell, Marks and Spencer, IBM and British Oxygen (BOC).

The three financial concerns have been specially sensitive about not giving the Agency's clients special terms, and about not trying to cream off the best business prospects. They have therefore mainly contributed to the agency's work by helping to build up the staff of nine who work in the headquarters of the London Chamber of Commerce.

The *other* companies have been more directly involved in providing help for the 40 or so main cases handled by the agency. No charge is made for the help unless, as sometimes happens, expert outside consultants are needed. One of them helped a small plastics company tackle a stock control problem by lending some of its organisation *and methods experts*, initially for a week and then for later visits.

Another company helped a theatre lighting manufacturer solve a technical problem which enabled it to obtain financial backing, while another accommodated a leather *goods manufacturer* on *one* of its internal training courses.

Businessmen have also been advised on how to start up companies manufacturing industrial safety equipment and electronic products, while one or two consumer goods manufacturers have been helped with their marketing problems.

The large companies providing this help initially had a variety of social, economic and political motives for becoming involved in the agency last April.

One practical benefit they have gained is that the people they have sent out to the small businesses have been exposed to a type of operation which they could never experience in their normal work.

There is therefore a useful *training element* in *the* exercise, even if some of the people involved have found it difficult *to* adjust to the considerably different and more independent life of the small business, which does not have the great mass of expert departments to help the manager do his job.

The next agency to get under way is likely to be the Birmingham venture which is backed by three banks—Barclays, Midland and National Westminster, along *with Cadbury Schweppes*, Birmingham Post and Mail, Delta Metal, R. M. Douglas Con*struction, GKN* and *Lucas* Industries. Co-ordinated by the Birmingham Chamber of Commerce, it *aims* to help with *inner city* as well as small firms' problems and will be drawing up a work programme later this month.

A day of unmitigated disaster

BY JASON CRISP

PIETER JOHNSSON, general manager of one of Gulf Oil's largest European operations, was in for a bad day.

Just before *seven in* the morning a Gulf tanker ran aground on a sandbank six *miles offshore*. One of the *tanks* containing 5,000 tonnes of crude ruptured, and a slick was spotted *heading towards* the beaches of a major tourist resort. It was a spot charter sailing under the Liberian flag.

Johnsson reached his office just after 8.30, and within minutes had a radio station demanding an interview. Gulf *is far from* popular among many members of the public, who see it as a multinational which ruth*lessly exploits* local resources, and also as a major source of pollution.

Johnsson agreed to let a reporter come and see him to ask questions on pollution, the effect of the slick on the tourist trade and the implications for the nearby wildlife sanctuary—as well as the possible threat of nationalisation—an issue of growing political interest.

He had scarcely put the phone down when the mayor of the threatened town phoned to demand an audience, in the company of a deputation of *officials* from the *tourist* trade. Again he agreed to see them.

Before either the radio *journalist* or the mayoral deputation had arrived the local Member of Parliament was on the phone in a fury over an interview with Gulf's head of research which had appeared *that morning in one* of the leading national papers.

Leaded petrol harmless

In high dudgeon, the MP complained about Gulf's claim that the present levels of lead in petrol were harmless and presented no risk to health.

The radio *reporter arrived* and gave Johnsson a hard time. How much oil? Why had Gulf not *taken immediate action*? What compensation would Gulf offer to hoteliers who lost tourist trade because of the pollution? What safety measures are taken to stop spillages occurring? Was the tanker inspected by Gulf before is was chartered? Is it true that the detergent being used to clear the oil slick was more harmful to wildlife than the oil alone? Did he agree the slick would devastate the catches of the in-shore *fishermen*? Did he not agree there should be greater government scrutiny of oil com*pany operations*?

By the end Pieter Johnsson was sweating. But the mayoral *deputation was to* be worse.

By now, because of the oil slick, the argument about lead and the *MP's accusations* about the *pollution of* land as well as the sea. Gulf oil, as one of the "Seven Sisters," was the major news item of the day. At very short notice Johnsson had to turn out to face a television interview — which was tough, and drew together the various issues.

As if this was not enough, at about ten o'clock a news flash on the local radio reported that a Gulf road tanker had crashed into a house in a picturesque village. That very morning there had been a letter in the newspapers complaining of the heavy traffic through the village, particularly from a Gulf refinery.

When you learn that the accident destroyed the cottage of a blind old age pensioner and killed her guide dog you may — if you had not already — begin to doubt whether one company could have so much misfortune in one day. But you have heard nothing yet.

The incidents were in the fictitious European country of Orbia. The role of Pieter Johnsson was played successively by senior managers from various Gulf subsidiaries in Europe, undergoing training at the end of last year in what the company calls "crisis management." They can hardly have enjoyed it.

Each evening for a week groups of about 30 senior managers were flown in from all over Europe to a hotel near London's Heathrow Airport. They were quickly handed a 21 page briefing on the mythical Orbia: its geography, its economy, its politics, its forthcoming election and Gulf's position there (not very favourable). They saw extensive colour slides as well. They had only the rest of the evening to familiarise *themselves* with all the *details*.

Next morning, at an early breakfast, they receive a newspaper, the influential "Orbia Telegraf," dated April 7, 1980. The lead story is of a freight train which has been blown up; it is suspected that terrorists are involved. Other stories include that feature on the harmlessness of lead in petrol by Gulf's head of research, and the letter on the heavy traffic through the village.

By 8.30 the hapless managers are wheeled into a large, subterranean room with a mock-up *office and a television studio*, and are surrounded by TV monitor screens. As each crisis develops one *manager is* pulled out from the group to become Pieter Johnsson, the general manager, to answer questions and defend Gulf's position. They have no warning that they will be called up; they have only a few seconds to marshall their thoughts; and they will have only *just* received the *facts* about the latest crisis on an information sheet.

I cannot compare the mock mayoral deputations with the real thing, but certainly the mock press conferences were markedly more abrasive than is normal. The journalists and dignatories were played by a small group of actors working loosely to a script, although one of them had a line in vitriolic asides to throw the most confident of men.

The result was often highly entertaining, except to the poor managers who had to find a defence to some very difficult circumstances. One of the organisers commented that in the mornings you could almost smell the participants' fear.

The *incidents* at the crisis seminar were to get worse. A small boy had convulsions after eating the head of a promotional puppet given away at Gulf petrol stations. Was it toxic? Who made it? Who tested it? Was it not irresponsible? The matron of the hospital wanted *to know about it*. The local press got the story. The boy's solicitor uncle threatened to sue.

An *angry* account-holder phoned to know why Gulf petrol was being sold at filling stations *for 10* per cent more *than* competitors' prices. Was this typical "Seven Sister" profiteering from OPEC price increases which had not come through?

By the afternoon session the situation for Gulf in Orbia was mayhem. There had been a major explosion in the refinery, with a number of Gulf employees killed, the fire was was spreading towards the chemical complex, a local village was to be evacuated, and about 60 journalists wanted to talk to the general manager.

Only then came a cri de coeur from one participant — though it was *certainly* shared by the others: "Isn't it our job to put the fire out and not waste time *talking to bloody journalists!*"

The immediate reply was: "By not involving the media you can create a greater disaster. You must try to get the media on the side of the manager. And when trouble strikes they don't want to deal with the PR man; there comes a time when 'Mr. Gulf' has got to get up there and be answerable."

Whether the managers liked it or not, they were told, each of the crises was a major "*story*." The *journalists would* get information anyway from another—and less well informed — source.

The purpose of the day's programme says the organisers, is not to teach the managers the techniques of dealing with irate phone calls, indignant delegations of dignatories, impertinent journalists, or the television interviewers, but to change their attitude towards them, and to be prepared for them. Specific training, in such things as television techniques, are taught at special courses.

"The lesson is that executives must be aware of the issues, the problems and the public attitudes in the environment in which you operate," says Tim Traverse-Healy, the public affairs consultant who, as the day's master of ceremonies, bullies, criticises and then cheers up the managers. "You are in business by consent of the public. Make no mistake—you need them. To stay in business you need profits and to make profits you need revenue. To get a revenue you need to make sales and to sell something you need a public."

The *Gulf managers* had to be more politically aware, they were told, because companies in *arms, aircraft* and oil are now very publicly exposed.

Their performance varied *greatly*. *Many would* have been pretty disastrous if they had been for real. This was partly because of lack of technique and also because of the environment: they were isolated from their normal staff support and could not demand information from obliging subordinates. Nor does it help to have a large roomful of people ready to laugh at mistakes.

Some techniques were picked up as the day went on—they learnt the importance of immediately expressing concern for the wellbeing of those injured in the crisis, and of the need to find positive points to put over.

Reminded how politicians will always *rush* to *the* scene of a disaster, some Gulf managers too began to say they were going *into* the area, to deal with the problem directly.

The difference between public attitudes and those of Gulf managers—the Gulf gulf?—was neatly demonstrated over the pricing of petrol at the pump. The managers tended to tell the irate account-holder that two thirds of their stations were dealer-operated and therefore the company could not control the price. But as was rightly pointed out, the public sees a great big Gulf sign outside the station and naturally concludes that it is the multinational which is profiteering at their expense. Of course, the public might be right.

What did Gulf actually hope to achieve with these exercises? They were not exactly inexpensive — considerable production and television equipment, actors, professional television interviewers, extensive scriptwriting, consultancy fees, management time and the cost of flying the people in from all over Europe.

Insurance policy

According to Peter Hamilton, head of Gulf Public Affairs in Europe, there were two main objectives. One was to familiarise the managers with the sorts of problems that might crop up for the company.

"But above all we are trying to stress the importance of preplanning to handle a crisis. We impress time after time the need for good corporate affairs, and that it is important for Gulf to have an integrated relationship with a community.

"It's a bit like an insurance policy. If you have spent time and effort developing your relationship with a community, if something does go wrong, then people will be much more likely to help you solve it than just shoot you down *for it*."

After nine hours without a break—over a quick lunch they all had to be ready to give a five minute speech on the benefits of multinationals to Orbia —the managers looked weary. As a number of them piled into the lift, one of them broke the silence, and said in a rather flat voice: "I suppose that was quite interesting."

LOMBARD

The Think Tank has a role

BY DAVID FISHLOCK

A SENIOR civil servant with the Ministry of Defence once told me that he had served a Defence Secretary—loyal to his profession, he would not name him—who believed firmly both in perpetual motion and little green men from unidentified flying objects. It certainly opened my eyes to some of the hazards those "faceless officials" in Whitehall run in letting the electorate select their bosses.

Last night in Granada's World in Action programme Mr. Anthony Wedgwood Benn, the former Secretary for Energy, savagely criticised his civil servants and the way they could obstruct his ideas. He told viewers that the "only lesson I've really learned in 29 years of parliamentary life" was that one could never get people in an established bureaucracy to support reform.

Misled

He offered five instances where, he alleged, officials had wilfully misled him, usually by withholding information he believed he should have had. They were, without exception, drawn from the field of nuclear energy.

In three cases he claimed information was deliberately withheld from him as "responsible minister." In another he claimed he was "misled." In the fifth he claimed his officials, to a man, ganged up on him to give him their point of view, and when he refused to accept it went behind his back and got the "Think Tank" to persuade other ministers that he was wrong.

Mr. Benn is particularly incensed by this last piece of "obstruction": by what he calls "bouncing the Cabinet," his phrase for civil service pressure for a particular course of action. He claims that he "won the battle in the Cabinet in the end because I worked very hard." In fact, the Labour Cabinet at the time authorised the very studies of the U.S. design of reactor that led to the latest Government nuclear decision, just before Christmas, namely that it wants to start building such a reactor in 1982-83.

But the fact that all of Mr. Benn's examples of official "obstruction" happened to be nuclear examples, during periods of office when he had responsibility for a wide range of British technology, is not likely to be lost on an electorate which knows his hostility to nuclear energy. Surely Concorde, or North Sea industry dominated, as it was when he inherited it, by the oil majors, might have afforded a non-nuclear example.

This common thread of his case against civil service power is not the only irony of last night's programme, however. Perhaps more significantly, even though he presented them all as examples of officials being obstructive, several cases were clearly examples of officials wanting action in circumstances where they suspected their minister of wishing to prevent any action.

According to Mr. Benn, the Think Tank is "a very dangerous development in the government": a separate government department without a minister in charge, with a brief to discover whether a minister is blocking the opinion of his own civil servants and to do something about it. It should be abolished or put under a minister like every other department, he said.

Successful

But under Labour in the mid-1970s the Think Tank was quite remarkably successful behind the scenes in prodding a previously pretty apathetic government to take action in the field of micro-electronics. This in turn prodded a dilatory industry into taking action itself. Indeed, later in that year the Think Tank was somewhat disconcerted when this column urged it to use the same diplomatic skills in order to bypass Mr. Benn in the nuclear sector—at a time when it was already embarking upon just such a course of action.

In maligning officials Mr. Benn is secure in the knowledge that their professional code prevents them not, as the TV programme would have it, from airing their rows with ministers, but from disclosing *any* advice they have given to a minister. But in calling for an end to the Think Tank, Mr. Benn is himself trying to abolish a major innovation of the Seventies in Whitehall.

Television's high technology decade calls for new awareness in years ahead

FILM AND VIDEO

BY JOHN CHITTOCK

IF A WEEK *is a long time in* politics, a decade is a lifetime in the audio-visual media. The changes of the last 10 years have been considerable, and enough to tempt me to turn up the cuttings of this column in December 1968 and January 1969. On the reverse side of one was a photograph of "Post-master-General John Stonehouse"—and my column of December 17 1968 gave advance details of what was to become the first videocassette system in the world, EVR, now a string of nasty red figures in the old accounts of ICI, CIBA and CBS.

Predictions

EVR was unfortunate in being rapidly *overtaken* by *even more* revolutionary video equipment. It was a film-based, playback only video machine. In that column, I predicted that it was "almost certain to displace the 16 mm projector." The prediction was incorrect in the specific detail, but correct in the general approach as video recorders now outnumber 16 mm projectors by over 2:1 in Britain and more users of moving pictures are switching from 16 mm in favour of video tape. The latest is Marks and Spencer, which is replacing 16 mm and film strip equipment with VHS videocassette machines. They are being installed *by Granada* TV Rental in all M and S stores.

Perhaps with prudence I have not probed too deeply into my other predictions of the past, lest I discover a howler to equal that of Antoine Lumière, one of the founding fathers of cinematography, who refused Georges Melies access to his Cinematographe machine saying "young man, you should thank me. This invention would ruin you. It can be exploited for a while as a scientific curiosity; beyond that it has no commercial future." At least the classic film maker of the 1920s, D. W. Griffith, was only wrong in his timing when he predicted that "100 years hence, I believe, the airplane passenger lines will operate motion picture shows on regular schedules between New York and Chicago and New York and London."

Some of the forecasts now being made seem as futuristic as Griffith's prediction must have sounded when made before transatlantic flying had been established. Indeed, a near namesake of his—Edgar H. Griffiths, President of RCA Corporation—last month predicted that video disc players would in 10 years achieve 30 to 50 per cent penetration of all U.S. homes equipped with colour TV. Taking the low end of that forecast he reckons that this means in the tenth year an annual production of between 5m-6m players and estimated sales of 200m-250m discs. Mr. Griffiths made his predictions when announcing that RCA's video disc system—a rival to the commercially available Philips player—will be launched in the U.S. early in 1981.

No one can seriously doubt that the next decade will see electronics totally dominate most forms of picture reproduction. As this inevitability has become evident in the last decade, the film industry has almost run out of ideas in keeping up the competition. Perhaps the most remarkable progress for film has been in the raw material itself, which has improved considerably; not only superlative colour quality nowadays but faster and faster emulsion speeds—permitting filming even by candlelight.

An example of this technical progress is to be seen in the latest Department of Transport film, made for the safe driving campaign in Britain. After Dark is a primer in night driving, providing the stark visual evidence of the dangers lurking in the shadows. What this film does is to prove the obvious—but the obvious that people are too complacent to accept. *Some* extremely well photographed sequences starkly reveal just how difficult it is to see a pedestrian or a hidden vehicle when driving in the dark.

Technically, it might well have been nearly impossible to have made this film ten years ago—at least, in quite the same way. With "driver's eye" views of dark streets and *country* roads, it provides the frightening evidence of how invisible hazards can be *at night*, with the braking distance often beyond the seeing distance.

Technology apart, I find that the sponsored film has made no progress in its creative standards or ideas over the last decade and may well have slipped back. Gallant efforts are still made on occasion to do something new, different or better, but somehow the zest has gone from the sponsored film.

The film industry must thank Standard Telephones and Cables, however, for having a rather ambitious try at hoisting the medium to its old level of creative excellence. In The Challenge of Choice, STC have *tackled the* "this-is-the-business-we're-in" type of prestige film. The subject is telecommunications and the press release says it is not a promotional film but one designed to provoke discussion. I find it completely unprovocative, and the commentary tedious. Conceptually it is quite unremarkable. Its virtues are in some excellent *photography*, good editing (with a brilliant opening sequence) and a stereophonic sound track with electronic music that I found I actually liked. It proves that the talent is still around, but perhaps we do not really have anything important to say in 1980.

Maybe we are now at a really major crossroads. In the last 10 years, technology has started to make moving pictures more accessible, more common-place—whilst creatively we have drifted away from the passion and the idealism out of which the cinema grew. That all sounds reasonable and possibly sensible if we can keep our sense of proportion. But where do we go from here?

If technology is making the moving picture the medium of the people, are we *culturally* capable of coping with it? Gutenberg's revolution of movable type called for a literate population; and literacy is now a cornerstone of our educational system. But few people are educated in the grammar of cinema and television, although most will consume it voraciously. Increasing numbers will also become untrained practitioners in these media as the technology makes picture production easier.

In the 1930s the battle of the cinema was to demonstrate its cogency and its power. In the 1940s it proved itself, and in the 1950s and 1960s it became an important industry from which television drew great creative experience and confidence. The 1970s saw the technology of television and video forge ahead, creating perhaps a cultural vacuum but providing the technical means for a new order in communication.

Social effects

It may be for the 1980s to determine how past experience and new technology can be most effectively used for the benefit of society. It suggests a need for a new public awareness of the creative nature of moving pictures — through education and practical participation. But it also indicates a need for greater understanding of the *social effects of the new media*. If finery is available to everyone, perhaps we shall come face to face with some of the inescapable truths of society—no longer sheltered by the excuse of bad communications.

An uninformative January

RACING

BY DOMINIC WIGAN

WITH THE Champion Hurdle picture almost as unclear as that concerning the Cheltenham Gold Cup, it is more than a pity that January affords practically no tempting races for the leading contenders for the first-named race.

Any trainer determined to "get a race into" a Champion Hurdle aspirant in this country over the next four weeks will have the option of either going for an event run over more than two miles (and quite possibly blunting his charge's speed in the process) or seeing his hurdler attempting to give lumps of weight away in an undistinguished handicap.

For the time being, at least, I remain convinced that the two who represent any sort of value ante-post-wise, with the 1980 hurdling crown in mind, are Rathconrath and Badsworth Boy. But for being brought down in Ascot's S.G.B. Hire Shop Hurdle on December 15, Badsworth Boy would, I feel sure, have made short work of Walnut Wonder.

Neither Pollardstown who, incidentally, was the cause of Badsworth Boy's departure there, nor Celtic Ryde, have yet to test me on their ability to take a hand in the finish of a Champion Hurdle.

The last-named, "the best I have ever trained," according to Peter Cundell, stands at 7-1 in most lists. Twice those odds would seem more appropriate.

Turning to today's racing, that improving seven-year-old, Dikaro Lady, strikes me as the safest proposition at Leicester where she goes for the 1.45 event. Dikaro Lady has improved by leaps and bounds since making her seasonal debut in a modest two-mile event at Carlisle on October 26.

LEICESTER
1.45—Dikaro Lady***
FONTWELL
1.00—Royal Judgment
1.30—Jet On*
2.00—Monty Python**

TV Radio

BBC 1

† Indicates programme in black and white

12.45 pm News. 1.00 Pebble Mill At One. 1.45 Trumptoo. 3.25 Dechrau Siarad. 3.53 Regional News for England (except London). 3.55 Play School. 4.20 Yogi Bear. 4.25 Jackanory. 4.40 Animal Magic. 5.05 John Craven's Newsround. 5.15 Grange Hill. 5.35 The Perishers.
5.40 News.
5.55 Nationwide (London and South East only).
6.20 Nationwide.
6.50 Robbie (London and South East only).
7.20 The Rockford Files.
8.10 Decision.
9.00 News.
9.25 Flesh And Blood.
10.20 The Nuclear Power Debate.
11.35 Weather/Regional News.

All Regions as BBC-1 except as follows:—

Wales—4.45-5.05 pm Bobol Bach. 5.55-6.20 Wales Today. 6.50 Heddiw. 7.15 Pobol Y Cwm. 7.40-8.10 A Question Of Sport. 11.35 News Headlines, News and Weather for Wales.

Scotland—12.40-12.45 pm The Scottish News. 5.55-6.20 Reporting Scotland. 6.50-7.20 Sing Along With Sunshine. 11.35 Can Seo. 12.10 am Write Away. 12.25 News and Weather for Scotland.

Northern Ireland—3.53-3.55 pm Northern Ireland News. 5.55-6.20 Scene Around Six. 6.50-7.20 As I Roved Out. 11.35 News and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwich); Look North (Leeds, Manchester, Newcastle); Midlands Today (Birmingham); Points West (Bristol); South Today (Southampton); Spotlight South West (Plymouth). 6.50-7.20 East (Norwich) Daly On A Tuesday; Midlands (Birmingham) Look! Hear!; North (Leeds) Lifelines; North East (Newcastle) Heroes; North West (Manchester) A Grand Sing; South (Southampton) Hey Look . . That's Me!; South West (Plymouth) Brainwave; West (Bristol) Breakthrough.

BBC 2

10.05 am Trade Union History.
11.00 Play School (As BBC-1 3.55 pm).
11.25 Write Away.
11.40 It's A Great Life.
2.30 pm Dilemmas.
3.00 Illusions Of Reality.
3.30 The Living City.
†5.40 Flash Gordon Conquers The Universe.
6.00 Newsround Africa.
6.30 Cricket: Australia v England (highlights).
7.00 Big Heel-Watha.
7.10 Mid-Evening News.
7.20 The World About Us.
8.10 Company And Co.
9.00 Movie Showcase: "Roseland," starring Geraldine Chaplin.
10.40 The Old Grey Whistle Test.
11.20 Late News.
11.35 Closedown: reading.

LONDON

9.30 am Animated Classic. 10.15 Untamed Frontier. 10.40 Cartoon Time. 10.45 Little House On The Prairie. 11.55 The Bubblies. 12.00 Simon In The Land Of Chalk Drawings. 12.10 pm Pipkins. 12.30 The Sullivans. 1.00 News, plus FT Index. 1.20 Thames News. 1.30 Airport Chaplain. 2.00 After Noon Plus. 2.45 Wilde Alliance. 3.45 Three Little Words. 4.15 Get it Together. 4.45 Magpie. 5.15 Emmerdale Farm.
5.45 News.
6.00 Thames News.
6.25 Help!
6.35 Crossroads.
7.00 Charlie's Angels.
8.00 Armchair Thriller.
8.30 Robin's Nest.
9.00 Hollywood.
10.00 News.
10.30 "Bullitt," *starring* Steve McQueen, Robert Vaughn and Jacqueline Bissett.
12.35 am Close: Richard Briers reads from "Hi!" by Norman Habel.

All IBA Regions as London except at the following times:—

ANGLIA

9.35 am Who's Afraid of Opera? 10.10 Sailorman. 10.35 Stars on Ice. 11.00 Chopper Squad. 11.45 Cartoon Time. 1.25 pm Anglia News. 6.00 About Anglia. 7.00 Bygones. 7.30 Selwyn. 10.30 Tuesday Late Film: "Dynasty" starring Sarah Miles. 12.20 am Your Music at Night.

ATV

10.35 am Buster Keaton Rides Again. 10.30 Film Fun: "Smashing Time" starring Rita Tushingham. 12.30 pm George Hamilton IV. 1.20 ATV Newsdesk. 5.15 Circus. 6.00 ATV Today. 7.00 Emmerdale Farm. 7.30 England Their England. 10.30 ATV Newsdesk. 10.35 The Tuesday Movie: "The Mercenaries."

BORDER

9.30 am Animated Classics. 10.15 Untamed Frontier. 10.40 Cartoon Time. 10.45 The Little House on the Prairie. 11.40 Cartoon Time. 1.20 pm Border News. 5.15 Father Dear Father. 6.00 Lookaround Tuesday. 7.00 Emmerdale Farm 7.30 Survival. 10.30 Luke's Kingdom. 11.30 Stars On Ice. 12.00 Border News Summary.

CHANNEL

1.20 pm Channel Lunchtime News. 5.15 Bailey's Bird. 6.00 Report at Six. 10.32 TV Movie: "Sarah T." 12.25 am Commentaires et Previsions Meteorologiques.

GRAMPIAN

9.25 am First Thing. 9.30 Chopper Squad. 10.15 Dockland Rules O.K. 10.50 Cartoon Time. 11.10 Survival Special. 1.20 pm North News Headlines. 6.00 North Tonight. 7.00 The Love Boat. 10.30 Country Focus. 11.00 Reflections. 11.05 The Tuesday Thriller: "Conspiracy of Terror." 12.25 am North Late Night Headlines.

GRANADA

9.30 am Sesame Street. 10.30 The Gift of Magna Carta. 11.00 The Flintstones. 11.20 History Around You. 11.35 Cartoon. 11.45 A Handful of Songs. 1.20 pm Granada Reports. 5.10 This is Your Right. 6.15 Crossroads. 6.00 Granada Reports. 6.30 Emmerdale Farm. †10.30 Film Of The Week: Trevor Howard in "Sons and Lovers."

HTV

9.45 am Kum Kum. 10.10 To The Top. 10.35 Survival. 11.00 Off On A Camel. 11.50 Larry The Lamb In Toytown. 1.20 pm Report West Headlines. 3.45 The Entertainers. 5.15 Magilla Gorilla. 5.20 Crossroads. 6.00 Report West. 6.30 Beat In The West. 10.35 The Big Picture: "Hammersmith Is Out" starring Elizabeth Taylor, Richard Burton and Peter Ustinov.

HTV CYMRU/WALES. As HTV general service except: 1.20 pm Penawdau Newyddion y Dydd. 1.25-1.30 Report Wales Headlines. 4.15-4.45 Sbardun. 6.00 Y Dydd. 6.15 Report Wales. 6.30-7.00 Quest Of Eagles. 10.35 Bywyd. 11.20 World In Action. 11.50-12.20 am Mind Your Language.

SCOTTISH

9.30 am Building The Tower Of London. 10.00 Feature Film: "Fire Down Below" starring Robert Mitchum and Jack Lemmon. 11.55 The Bubblies. 1.20 pm News and Road and Weather. 1.30 Cabbages and Kings. 5.15 Cartoon. 5.20 Crossroads. 6.00 Scotland Today. 6.30 What's Your Problem? 10.30 Charles Rennie Mackintosh. 11.30 Late Call. 11.35 Fireside Theatre.

SOUTHERN

9.30 am Call It Macaroni. 9.55 Kum Kum. 10.20 The Rolf Harris Show. 10.45 Stationary Ark. 11.10 The Little House on the Prairie. 1.20 pm Southern News. 5.15 Dick Tracy Cartoon. 5.20 Crossroads. 6.00 Day By Day. 7.00 Emmerdale Farm. 7.30 Father Dear Father. 10.30 Southern News Extra. 10.35 "The New Centurions" starring George C. Scott.

TYNE TEES

9.20 am The Good Word followed by North East News Headlines. 9.30 Space 1999. 10.20 Canadian Celebrity Concert. 11.15 Last Of The Wild. 11.30 The Beardes. 1.20 pm North East News and Lookaround. 5.15 Selwyn. 6.00 North East News Headlines. 6.02 Crossroads. 6.25 Northern Life. 7.00 Emmerdale Farm. 7.30 Survival. 10.30 Come In, If You Can Get In. 11.00 North East News Headlines. †11.02 "Offbeat" starring William Sylvester. 12.50 am Epilogue.

ULSTER

10.35 am Spiderman. 10.55 Tarzan. 11.45 Sean The Leprechaun. 1.20 pm Lunchtime. 4.13 Ulster News Headlines. 5.15 Cartoon. 5.20 Crossroads. 6.00 Good Evening Ulster. 7.00 Emmerdale Farm. 7.30 A Drop In Your Hand. 10.29 Ulster Weather. 10.30 Feature Film: "Sons And Lovers" starring Trevor Howard and Wendy Hiller. 12.20 am Bedtime.

WESTWARD

9.40 am The Woody Woodpecker Show. 10.15 Call It Macaroni. †10.40 Feature Film: "Nuns On Wheels" starring Juliet Mills. 12.27 pm Gus Honeybun's Birthdays. 1.20 Westward News Headlines. 5.15 Bailey's Bird. 6.00 Westward Diary. 10.32 Westward Late News. 10.36 TV Movie: "Sarah T." 12.25 am Faith For Life. 12.30 West Country Weather and Shipping Forecast.

YORKSHIRE

9.30 am Heritage. 10.20 The Secret Lives of Waldo Kitty. 10.45 Call It Macaroni. 11.10 Cash And Company. 1.20 pm Calendar News. 3.45 Calendar Tuesday. 6.15 Selwyn. 6.00 Calendar (Emley Moor and Belmont editions). 7.00 *Emmerdale* Farm. 7.30 Survival. 10.30 The Tuesday Film: "The New Centurions." 12.15 am George Hamilton IV.

Radio Wavelengths

1	1053kHz/285m 1089kHz/275m	3	1215kHz/247m & 90-92.5vhf stereo
2	693kHz/433m 909kHz/330m & 88-91vhf stereo	4	200kHz/1500m & 92.95vhf

BBC Radio London: 1458kHz, 206m & 94.9vhf
Capital Radio: 1548kHz, 194m & 95.8vhf
London Broadcasting: 1151kHz, 261m & 97.3vhf

RADIO 1

(S) Stereophonic broadcast
‡ Medium wave

5.00 am As Radio 2. 6.00 Dave Lee Travis. 9.00 Simon Bates. 11.31 Paul Burnett. 2.00 pm Andy Peebles. 4.31 Kid Jensen. 7.00 Personal Call. 8.00 Mike Read. 8.50 Newsbeat. 10.00 John Peel (S). 12.00-5.00 am As Radio 2.

RADIO 2

5.00 am News Summary. 5.03 Cricket: Australia v. England. 5.04 Steve Jones (S) including 5.03, 7.03 Cricket and 6.15 Pause for Thought. 7.32 Terry Wogan (S) including 8.03 Cricket, 8.27 Racing Bulletin and 8.45 Pause for Thought. 10.03 Jimmy Young (S). 12.15 pm Waggoners' Walk. 12.30 Pete Murray's Open House (S). 2.16 Ray Moore (S). 4.16 Much More Music (S). 5.00 News. 5.05 Waggoners' Walk. 5.20 John Dunn (S). 6.45 Sports Desk. 7.02 Brian Fahey and the BBC Scottish Radio Orchestra (S). 7.30 Folk 80 (S). 8.02 Tuesday Night is Gala Night. 9.02 Max Jaffa with Music For Your Pleasure (S). 9.55 Sports *Desk*. 10.02 *Variety Club*. 11.02 Brian Matthew with Round Midnight, including 12.00 News, 1.02, 2.02 am Cricket. 6.00 You And The Night And The Music (S) with Jan Leeming, including Australia v. England (reports). 2.03-3.02, 4.02 Cricket.

RADIO 3

7.05 am Weather. 7.10 News. 7.15 Overture (s). 8.00 News. 8.05 Morning Concert (s). 9.00 News. 9.05 This week's composer: Bartok (s). 10.00 The Trio-Sonata (s). 11.00 A New piano sonata by David Carhart (s). 11.55 BBC Welsh Symphony Orchestra: Beethoven concert, part 1 (s). 1.00 pm News. 1.05 Six Continents. 1.20 BBC Welsh SO part 2 (s). 2.00 20th-Century cello music (s). 2.35 In the shadows of the great (s). 3.20 Symphonies from Eastern Europe (s). 4.25 Jazz Today (s). 4.55 News. 5.00 Mainly for Pleasure (s). 7.00 Beethoven (s). 7.30 Award winner: "Strond," play by Severo Sarduy (s). 8.30 Mozart concert, part 1 (s). 9.25 Black Christianity in South Africa (talk by the Rev. Dr. Edward Norman). 9.45 Mozart, part 2 (s). 10.20 Bricks and Mortals by Jack Trevor Story. 10.45 Songs by Medtner (s). 11.25 Jazz in Britain (s). 11.55-12.00 News. 12.00 midnight-7.05 am Test Match Special — Australia v. England.

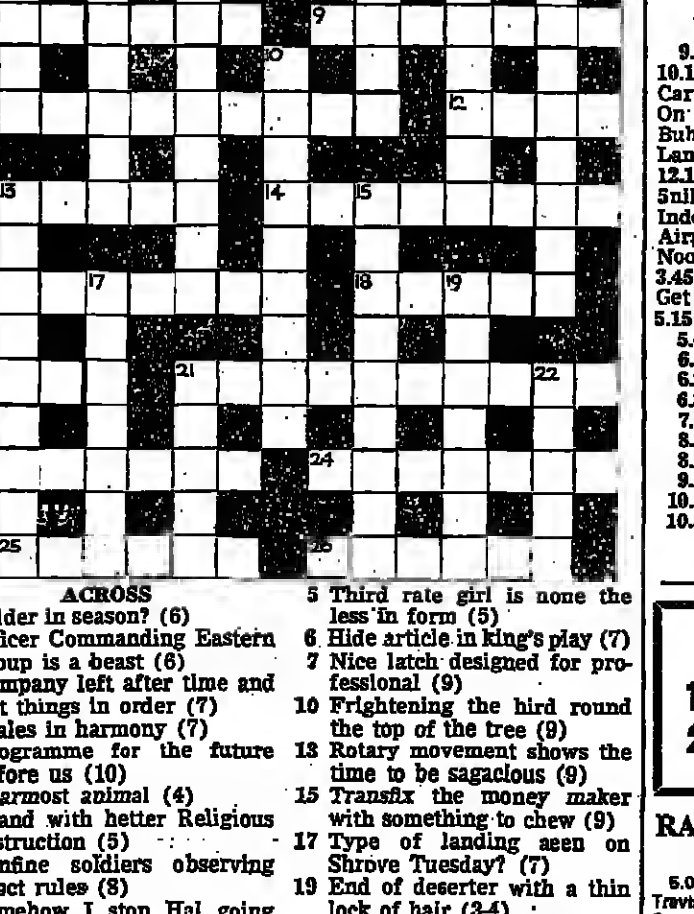
RADIO 4

6.00 am News Briefing. 6.10 Farming Today. 6.25 Shipping forecast. 6.30 Today live from India, including 6.45 Prayer for the Day. 7.00, 8.00 Today's News. 7.30, 8.30 News headlines. 7.45 Thought for the day. 8.45 The Great Railway Bazaar. 9.00 News. 9.05 Tuesday Call. 10.0 News. 10.05 In Britain Now. 10.30 Daily Service. 10.45 The Bridge Of San Luis Rey. 11.00 News. 11.05 Thirty-minute Theatre (s). 11.35 Still Small Voices. 11.55 Sounding Off. 12.00 News. 12.02 pm You and Yours. 12.20 Down Your Way. 12.55 Weather; programme news. 1.00 The World at One. 1.40 The Archers. 1.55 Shipping forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.02 Listen with Mother. 3.15 Afternoon Theatre (s). 4.10 Bookshelf. 4.40 Announcements. 4.45 Short Story. 5.00 PM. News magazine. 5.50 Shipping forecast. 5.55 Weather; programme news. 6.00 News. 6.30 Just a Minute (s). 7.00 The Archers. 7.20 The Matter of Arthur. 8.05 In Touch. 8.30 Moonshine on . . . (s). 8.15 From our own correspondent. 8.30 Kaleidoscope. 9.59 Weather. 10.00 The World Tonight. 10.30 Cider Cup (s). 11.00 A Book at Bedtime. 11.15 The Financial World tonight. 11.30 On the Lighter Side (s). 12.00 News.

BBC Radio London

5.00 am As Radio 2. 6.30 Rush Hour. 10.03 The Robbie Vincent Telephone Programme. 1.03 pm London Live. 3.03 Showcase. 4.30 London News Desk. 5.35 Look, Stop, Listen. 7.03 Black Londoners. 8.00 The Extra Ordinary Level Show. 9.00-5.00 am Join Radio 2.

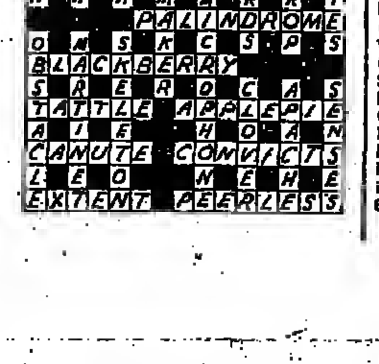
F.T. CROSSWORD PUZZLE No. 4,168



ACROSS
1 Adder in season? (6)
4 Officer Commanding Eastern group is a beast (6)
8 Company left after time and put things in order (7)
9 Scales in harmony (7)
11 Programme for the future before us (10)
12 Rearmost animal (4)
13 Island with better Religious Instruction (5)
14 Confine soldiers observing exact rules (8)
16 Somehow I stop Hal going here for treatment (8)
18 Register in screen role (5)
20 Flay the king living in sin (4)
21 Progeny giving information on eastern allowance (10)
23 Wonder when *motoring* organisation will appear in distance (7)
24 A sapper in a money-making institution with a tower (7)
25 Excused from a small measure of exercise (6)
26 Nothing left in the gun. It has been purloined (6)

DOWN
1 Southern river or track (5)
2 Effeminate fellow extracts money from work (4-3)
3 Text miser arranged for a radical (9)
5 Third rate girl is none the less in form (5)
6 Hide article in king's play (7)
7 Nice latch designed for professional (9)
10 Frightening the bird round the top of the tree (9)
13 Rotary movement shows the time to be sagacious (9)
15 Transfix the money maker with something to chew (9)
17 Type of landing seen on Shrove Tuesday? (7)
19 End of deserter with a thin lock of hair (3-4)
21 Dance with girl before work (5)
22 Deep canoe possibly (5)

SOLUTION TO PUZZLE No. 4,167



ENTERTAINMENT GUIDE

OPERA & BALLET

THEATRES

CINEMAS

ART GALLERIES

CLUBS

THE ARTS

Ten satisfying years by WILLIAM PACKER

1979 marks a particular period for me, for it is now a full 10 years since I first found myself writing about the visual arts in the public prints. But please do not lose heart: further than saying that throughout a time of enduring economic constraint, British art, artists and the institutions that sustain them seem to me to have continued in the most *surprising* and gratifying rude health, I have no intention of attempting an extended survey or assessment, personal or otherwise, of the late decade.

It simply started as it went on, the work conforming to no clear direction or school; and we in the art world suffered as always, making life ever more difficult for ourselves by our squabbles and misunderstandings, and getting our usual portion, and more, of active indifference from the public at large.

And yet, across the whole spectrum of activity, work of real quality and achievement regularly appeared, unspectacularly perhaps, apologetically, even unremarked, but there all the same: plus *c'est la même chose* indeed. Looking back over this past year, it may fairly be said to stand for all the others.

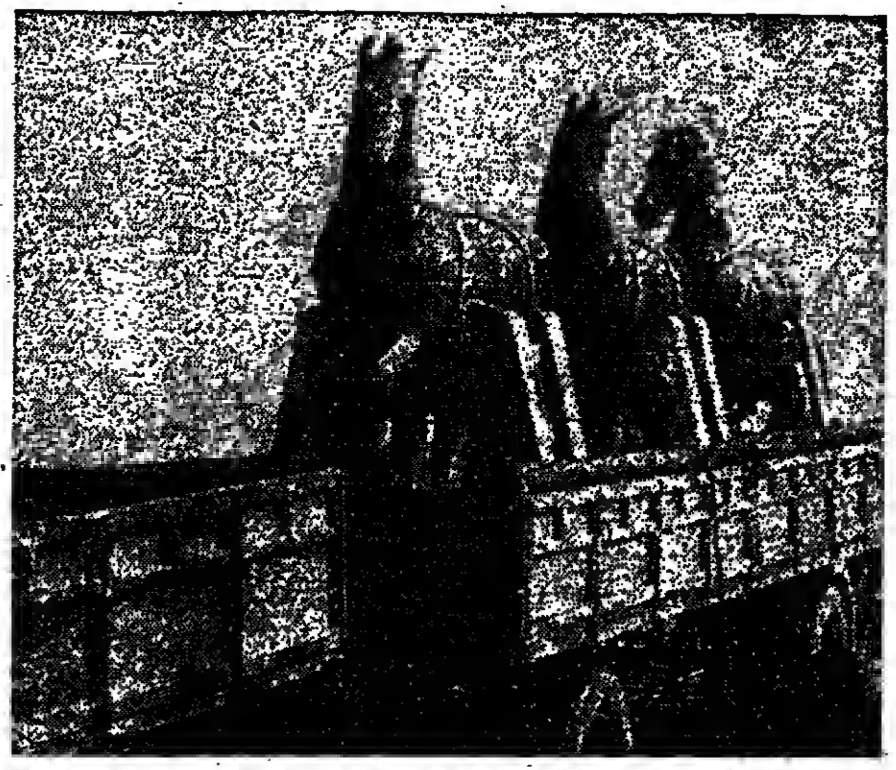
We have been conspicnously spoilt, which happy condition is hound to continne for many years yet, for though we have Goths enough among nur Masters, who seem so loth to add to them at times, it would take the new Cromwell himself, to break up our great national collections.

These amazing stories of such varied treasure, which surely only the half civilised can bring themselves to ignore, create the aesthetic and critical climate in which the art world in general, and London's art world, private and public, ancient and modern, may flourish.

One exhibition a year, such as the Flowers in Art at the British Museum last summer, would be treat enough at any time; but as always such treats came thick and fast. Many of them dealt with older as opposed to modern art, and as such usually fell to my distinguished colleagues, Doctors Strong and Piper, to cover; which is not at all to say that I ever felt could afford to *miss* them.

Quite the contrary, in fact, for I can tell you that nothing gives more pleasure to your reviewer than to enjoy a great exhibition for itself alone—privilege, as it were, without responsibility.

The world will divide itself in future, for example, between those who took the trouble, in the many months that it was on, to see the Holbein Drawings from Windsor at the Queen's Gallery, and those who did not. Technically it belonged to 1978, I know, hnt it continned long into 1979, and was one of the most beautiful and extraordinary exhibitions of any year, or any decade.



Events of year: Left, the official opening of the Tate Gallery extension. Her Majesty the Queen with Sir Norman Reid, Director of the Tate Gallery. Right, the Horses of San Marco, one of which appeared at the Royal Academy, being taken to safety during World War II

And there was the Horse, which the Royal Academy and *Olivetti* together hrought from the portico of St. Mark's to Burlington *House*, further north and west than in all its years it had *ever* travelled before. It was the single most extraordinary, *the most memorable* sight of the year, of the *decade, almost more than* enough on its own; but it was not *alone*, for with it came a whole squadron of ancient and *beautiful beasts*.

I had seen a similar show in Venice *two* years before, in the earlier stages of the cleaning and restoration, but with only the actual head and a life-size cast: this was the real thing—and again that significant divide npens up between the wise and the foolish.

Remaining with the Academy for a moment, one of the most important and, I hope, lasting developments of recent years was the confirmation of the movement hegun long ago under Sir Thomas Monnington, and continued most actively under the present President, Sir Hugh Casson, that has brought the Academy back into the centre of affairs, with an ever more ambitions programme of events and exhibitions.

Lately it has grasped the twin nettles of official help, through the Government's indemnity scheme, a most sensible step which immediately makes major loan exhibitions possible once more, and of sponsorship.

We must hope that others will follow the generous lead set by Olivetti and now IBM, which latter company has rallied tn the magnificent Post-Impressionist Exhibition, yet another show of infinitely more than temporary significaoce, one which has changed out reading of its subject utterly.

But the year does not belong entirely to the old masters, Sargent and Lawrence at the National Portrait Gallery and Degas in Edinburgh notwithstanding. My year was bounded by the British Council's Un Certain Art Anglais, in Paris and Brussels early in the year, and my own British Art Show for the Arts Council, which opened in Sheffield last month, and punctuated the Hayward Annual, the Tolly Cobbold and the Whitechapel Open.

And for all their faults, which in one case at least are not mine to dilate upon, at least not now, I do believe that all these shows demonstrated in their fashion, if only in part, the many and very different strengths of current British art.

Outstanding single shows inclnded John Walker's drawings and the Hubert Dalwood *Memorial Show*, both in January, the travelling show of *David Hockney's prints* that I caught in Nottingham, Phillip King at *Easter*, and on *through* the year with Leon Kossoff, Prunella *Clough*, Patrick Caulfield, John Hoyland, David Tindle and Keith Milow, an accidental series as varied as it *was stimulating*.

And there were important historical exhibitions: Jackson Pollock at Oxford the most spectacular, David Jones at d'Offay the most exquisite, David Bomberg at Whitechapel the most moving.

The most important single event of the year, however, was institutional rather than purely visual, though it supplied plenty to look at, and a most memorable occasion. At the end *of* May, while the entire establishment *of the English art world*, artists, administrators, critics, scholars, drank excellent claret to the sound of fireworks, Her Majesty the Queen declared the extension to the Tate open at last.

So desperately was it needed, and *so long and difficult* the labour that produced it, that the relief at *its realisation* was general and genuine. If it seems inadequate *still*, that must be because that Tate itself is required to do too much, and the great issue to face for the future is not the provision of more space on the site, but the separation of the Historic British from the Modern Collection.

Which will move, should move *ever* be possible, is the great question for Professor Bowness, the new director, to answer: hut should the modern collection remain, the new extension *will* certainly provide an excellent base. *Sir Norman Reid, who* retired as director at the turn *of the year, has been so closely* identified with its achievement that *it is hound to stand as his* memorial, and quite rightly so.

Sir Norman sailed his hoat through the most treacherous shoals and cross-currents, and occasionally the choppiest of water, and was often criticised for the course he took. The rehang of the modern side of the gallery, and the filling of the new galleries with works acquired during his directorship, to celebrate the grand inanguration, was necessarily seen as a personal statement, and was in the event something of a personal triumph.

Mnch has been made, often ungenerously, nf Sir Norman's predeliction for abstract and conceptual art: but he inherited a collection that was manifestly *unbalanced at a time when such* abstract work was of central importance. Personal *judgments* are personal judgments (though we must never forget that Trustees did the buying), and we may well take issue with any one of them.

But figurative art was never proscribed, and the re-examination of earlier phases in British twentieth century art, such a marked trend in recent art scholarship, was also closely matched. Inevitably a national collection will carry a certain national bias. Sir Norman's great achievement, which that inaugural display made clear, is that he has secured fnr ns a collection of modern art which sets British Art fairly in its international context, a collection liberally supplied with important, historic and often very beautiful works, admirably wide in its scope, serious in its purpose, and far more generous in its attitude to the wnrld at large than is usually the case with Museums of Modern Art.

It takes nothing away from our wishes for his own success to say that Professor Bowness has been singularly fortunate in his predecessor, as indeed we all have heen these 15 years past. Sir Norman has earned himself a long and happy retirement.

Northern Arts support for individual artists

Forty three artists and craftsmen living and working in the North have received awards ranging from £50 to £1,000 from Northern Arts as part of the Association's increased commitment to helping the individual artist. The total value of the awards is over £14,200.

The largest single award winner is Richard Kidd of Gateshead who received £1,000 to prepare work for forthcoming exhibitions at Newcastle and Nottingham. £750 sculpture commissions go to Brian Thompson of Tynemouth and Nicholas Lloyd of Ebchester with £773 to sculptor David Williams of Caldbeck, Cumbria.

Elizabeth Clay of Port Carlisle has been given the largest crafts award of £840 as a commission for a silver howl for the permanent Crafts Collection at the Shipley Art Gallery, Gateshead. £500 awards go to Tim Meacher of Alston for his leatherwork, to Martin Morris of Grasmere for his violin making, to Colin Ross of Whitley Bay for making Northumbrian pipes and to Robert Davis nf Newcastle for his ceramic work.

Elizabeth Hall

Clarinet trios

by ANDREW CLEMENTS

A trio of clarinet with piano and a stringed instrument is an awkward combination to handle. A clarinet quintet allows the composer to contrast solo woodwind and strings—clarinet may he set against the quartet in concertante fashion or absorbed into the texture as an enriching voice—but the trio demands two matched voices to blend and support each other against the piano.

The Mozart clarinet trio, with viola, works best of all, but the trios with cello by Beethoven and Brahms are more problematic. On Friday evening Janet Hilton, Ralpb Kirshbaum and Peter Frankl tackled both of them as a further instalment in the "Mainly Beethnven" series in the Queen Elizabeth Hall.

Mr. Frankl was breaking off from his Schumann pilgrimage at the Wigmore Hall for a less strenuous evening of chamber music, and his air of genial relaxation spread to his partners. Together they provided a highly enjoyable, civilised programme.

Miss Hilton is not heard often enough in London. She is a clarinettist whose gentle tone and elegant phrasing are ideally suited tn small-scale performances; her contribution, in music that assumes an equal partnerhip, became the natural focus of attention.

Yet for all the felicities of the performance, Beethoven's trio Op. 11 remained awkward. It is sometimes played with a violin replacing the clarinet; because the piano is the prime mover, reducing the other instruments to supporting roles, it may sound more convincing in that version. Mr. Frankl relished his task, occasionally confusing the issue with his pedaling, hlurring the hravura writing in the first variation of the finale, for instance, but always finding irresistible rhythmic interest in the most meagre of material.

The Brahms trio Op. 114 lies more happily on the instruments. Miss Hilton here was outstanding, clothing the arpeggios nf the final bars of the first movement in the most velvety tone, leading the celln intn the most delicately poised of dialogues in the slow movement.

Between clarinettist and pianist Mr. Kirshbaum was aometimes shaded, hut partnered by Mr. Frankl in Beethoven's cello sonata Op. 69 he found much muscularity and bite, perhaps, however, understating its *cantabile* moments.

Festival Hall

The Nutcracker

by CLEMENT CRISP

As the Christmas decorations come down we must nnte the presence of that dear bauble *The Nutcracker* on the South Bank. Ronald Hynd's staging for Festival Ballet is sensihle without losing sight of the fact that hordes of very young balletgoers will receive their baptism by dance in these hallowed festivities.

On Thursday afternoon most of the audience was knee-high but plainly enraptured, and Festival Ballet's artists deserve every commendation for seeming so happy with their twice-a-day task. I had hoped to see the company's Italian recruit, Lucia Truglia. She was, alas, indisposed, and Vivien Loeher and Tom van Cauwenbergh were the heroine and her cavalier.

Miss Loeber offered a creamy, smooth-flowing account nf the dances; Mr. van Cauwenbergl an original and convincing view of the Hoffmanesque hero. He makes Karl—who is Drosselmeyer's nephew in this version —a slightly gauche and matter of fact young man at the party, looking rather ont of his social depth. But once the dream sequence begins, van Cauwenberg, like Karl, is transformed.

His dancing *is strong in* outline; gesture is noble, admirably spacious; he acquires a physical allure which makes very good *sense of his identity* as a dream-extension of the real-life figure.

The perfnrmance also hrought my first sight of a new recruit to the company from Sweden, Matz Skoog. A young dancer of clear, good school—a bright, Bournonvillian manner; pleasing *ballon* and elevation—he made an excellent impression as nasty little Fritz. Mr. Skoog sailed hlithely through his one solo, the jig, and acted his unappealing role without declining into coarseness or too many madcap japes: even on this showing he is a valuable acquisition.

Arts Council theatre writing bursaries

The Arts Council has approved a theatre writing hursary of £1,500 to Cherry Potter and nne of £750 each to Andy Armitage and Jane McCulloch.

Elizabeth Hall

Bishop-Kovacevich

by DAVID MURRAY

The principal work in Bishop-Kovacevich's recital on Sunday was Beethoven's Thirty-three Variatinns on a Waltz by Diahelli. The first part of his programme had the air, indeed, of a mere prelude—which was hardly fair to Schumann's F-sharp minor Sonata op. 11, imperfect work thongh it may be. The pianist gave an attractive sketch of it, but not a finished account—problems of balance in the Allegro vivace left several passages struggling to be heard, and the finent glitter of the Scherzo and the Finale (which was left candidly shapeless) sonnded compromised by tentative fingers.

Bishop-Kovacevich's npening Mozart sonata, the early K. 282 in E-flat, was better realised, in a remote and reflective way. He played it gently, dreamily, nervelessly, like a romantic reminiscence of something long past. The same trick nf all-but-toneless articulation — more effective in a recorded performance than in a large hall—was to recur in the "Diabelli" Variatinns, but set off there by contrasting power and dash.

We were forewarned that the pianist has had new thoughts about Beethoven's great variation-set aince his admired recording nf it several years ago. The high mettle nf the theme as he delivered it confirmed that at once, and in what followed there was a newly extrovert tone in many places. The first Presto variation was actually violent, and torrential energy informed the 22nd and 23rd variations.

On the other hand there was long-drawn serenity behind the Grave e maestoso, and the first Andante variation was moonstruck; the little Fughetta might have belonged to Schumann's *Kinderszenen*. Bishop-Kovacevich huilt the whole "Diabelli" structure this time from deliberately distinct bricks, with no attempt at an illusion of steady continnity; high contrasts defined the whole reading.

The perfnrmance was often exciting: less cnnsistent so far than the pianist's previous version, but potentially richer. Certain extremes perhaps need to be brought into more convincing relation yet. His towering, relentless drive through the 28th variation, for example, was succeeded by his most private playing in the C minor Adagio and Andante, barely breathed and almost toneless again, and the effect was puzzling.

From the earlier Presto acherzando onward, in fact, there bad been a good daal of edgy brittleness. There was perceptibly better control in the last three variations, with more warmth than expected in the final Tempo di minnetto—not an other-wordly whisper, but an amiahle afterthooght. Plainly this is still work-in-progress, and it promises much.

Soho Poly

The King and Me

by MICHAEL COVENEY

For a young *married* couple going slowly mad to the music of Elvis Presley *in* a high-rise flat in Catford, a Presley look-alike competition, *with its first* prize nf two weeks in Memphis, Tennessee (second prize, three weeks?), offers a glimpse of the escape route.

Hanif Kureishi's oppressive lunchtime play curiously asserts, however, *that Marie* and *Bill* did in fact once see Presley in Las Vegas. How on earth did they afford that?

Elaine Donnelly is the gin-*sodden* wife, a particularly stupid and repulsive woman who ignores her *children, bullies* her husband, refuses to go out the front door and moons *around* kissing photographs of Presley. Elvis himself is dead, so the play sounds another false note when Miss Donnelly tells her outraged sister that she can imagine herself on "Sunday Night at the London Palladium." No one of her age would *remember the show.*

Anyway, I find the piece's pretensions as an investigation of working-class misery glib and sentimental; what promise Mr. Kureishi does display is seen in the highly fraught marital exchanges that top and tail the talent contest.

Antonia Bird's prodnction is noisy and pretty nerve-*wracking*, with blasts of Elvis scattering cigarette ends over the *tawdry furniture* and the doomed couple playing at a boldly emotional pitch for so small a space. Miss Donnelly, and her reluctant partner in fantasy, Mike Grady, are superb: she lolling around in postures of provocative stupor while he desperately tries to stave off complete collapse by dutifully trundling off to Hammersmith to make a fool of himself in a white studded jacket. The compères *material* is rather thin, but the design by Louise Belson solves the *switch* of location with an economical aplomb.

Simon Rattle for South Bank summer music

Simon Rattle has been named *new artistic director* of South Bank summer music for 1981-83. He *succeeds Pinchas Zukerman*, who will appear as artistic director of the annual *chamber* music festival for the last time in August.

Swiss Theatre

Düerrenmatt's echo

by OSSIA TRILLING

At 59 Friedrich Duerrenmatt should be at the top of his powers. And so he is. Why, then, rehash an old tale—his short story of 25 years ago, pub*lished in* England as *A Dangerous Game*—as a melodrama called *Die Panne* (*The Breakdown*)? It seems that his last two plays fared ill at the Zurich Schauspielhaus, site of his earlier world premieres, at the hands of *ontside directors*, and his agent Egon Karter, who runs a Swiss *touring* company, talked him into it and had him direct it himself. The long tour opened in Germany and arrived, via Vienna, in his homeland, not in Zurich—but in the brand new Theater am Stadtpark in the industrial city of Winterthur. Apart from the same basic plot, *it bears little resemblance* to the original, or the subsequent radio and TV *adaptations by others*. With his impish sense of humour, the author turned the story inside out and writing in new scenes and characters in rehearsal ended np with what is virtually a new play.

Enrico Traps, the tragi-comic hero, is a "moyen homme *sensuel*," *a typical Swiss* travelling salesman, with a broken-down Jaguar, who finds himself dining with a quartet of elderly ex-lawyers in a remote country-house. He gleefully joins in their prandial mock-trial, though as innocent, or as guilty, as you or I—which seems to he the moral of Duerrenmatt's fahle. Traps is convicted of nothing more heinous than a *venial* case *of* adultery, the discovery of which led indirectly to the cuckold's death from a heart-attack. Traps claims full responsibility for the alleged murder and takes his own life.

As *director*, Duerrenmatt is plainly guilty of over-indulging *the gags*, including that of ostentatiously replacing an absent stage-hand in Winterthur, and the final masked Greek Chorus of the lawyers trails somewhat. But the gags, including that of flashback form, over the suicide's coffin, as it were, from which Peer Schmidt's woebegone Traps emerges Phoenix-like after the prologue to re-enact his sorry tale, works *splendidly*, and so does Karl-Heinz Stroux as the overbear*ing presiding judge*.

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The return of Mrs. Gandhi

THE RESULT of the Indian election represents a personal triumph for Mrs. Indira Gandhi. In just two years and nine months, she has clawed her way back from the ignominy of a crushing defeat to lead once again the world's largest democracy. She has done it on her own. She has done it against the combined forces of all her political opponents. It is a truly extraordinary achievement.

Democracy

But the result is also a triumph for Indian democracy. Between March, 1977, and January, 1980, 360m Indian voters have been given two chances to tell their political leaders how they want their country governed. In 1977, they gave vent to a set of powerful emotions against the excesses of Mrs. Gandhi's emergency. The voters offered India's opposition politicians a chance to show what they could do with the alternatives they had on offer. Mrs. Gandhi's opponents frittered away those years and failed to give the voters the leadership they had been promised. They too have now been told that enough is enough.

In a relatively short space of time, the Indian people have been offered and have rejected a highly personalised dictatorship; now, they have come back with a plea for firm and effective government. For a country as underdeveloped and as fragile as India, the survival of the democratic process cannot be taken for granted. The last two elections should have served to reinforce its strength.

Family bond

The danger is that Mrs. Gandhi will dwell on the verdict of the voters in January 1980, and will chooose to ignore what they said in March 1977. She herself has never apologised for the excesses of her emergency, nor has she made any promises that she will not repeat them. *Qui s'excuse s'accuse* has been her watchword. Instead she has sought to re-establish the personal and family bond that she believed existed between herself and the Indian masses. That bond is now re-established in the most unequivocal terms. The Indian people have voted for their "mataji" (mother).

It would be tragic, however, if India's yearning for strong Government led Mrs. Gandhi back towards the path of her emergency. The notion that a populist leader can govern a country as large as India through a rigorous, centralised autocracy is almost certainly doomed. India is too diverse, its regions, its languages, its religions, its cultures too varied for any single person or group of people to control it from Delhi. It is to be hoped that Mrs. Gandhi's headstrong son, Sanjay, has learned from the excesses of the sterilisation programme. The programme, designed to achieve the laudable aim of curbing India's fast-growing population, was crude in origin and ham-fisted in execution,, putting far too much power in the hands of petty local officials, many of whom had scores of their own to settle.

Afghanistan

Something more subtle is needed in India than old-fashioned authoritarian rule. And the quality of people from which Mrs. Gandhi must now choose her new cabinet, many of them handpicked by Sanjay, will make the tasks that face her new Government no easier. Those tasks are the same as have faced all Indian Governments since independence—increasingly violent regional and caste divisions, mass illiteracy, mass poverty, a country steeped in conservative traditions which make the job of the reformer all the harder.

She is also faced by a new threat to India's integrity from the north, following the Russian invasion of Afghanistan. Mrs. Gandhi has traditionally regarded Russia as a friend to India, and has made no secret of her distaste for and distrust of the U.S. One of the earliest and most significant decisions she will have to make is how India reacts to Russia's expansion southwards.

In the longer run, however, Mrs. Gandhi will be judged by a simple criterion. The Indian people have given her an overwhelming endorsement as their leader. What they expect is economic advance, and end to violence, and the chance to vote against Mrs. Gandhi should she fail to deliver.

U.S. recession still awaited

SOME EIGHTEEN months after its appearance was first hilled, there are still doubts about the timing and extent of the U.S. recession. Two major sectors of the economy remain weak: sales of domestically produced cars, and the housing sector. On the other hand the most recent evidence on some other important components of demand shows renewed strength. Consumer spending, which faltered after the Fed's October measures and the ensuing financial shock, has recently been showing quite sharp gains—about three per cent on an annual basis; and industrial investment is still rising.

Worth examining

The simplest explanation of these divergent trends is simply that consumer demand and investment spending would normally be expected to turn down relatively late during the onset of a recession, and that the weakness in housing, motors and that arising from an excessive level of stocks will undoubtedly assert itself in due course, and this probably remains the safest interpretation for the trading partners of the U.S. However, if the odds are to be assessed with any confidence, the question is worth examining a little further.

On the consumer side, the continuing strength of demand is not altogether surprising. There is a growing body of evidence that the U.S. retail price index, both because its base is nearly two decades old, and because it gives altogether excessive weight to interest rates, has overstated the squeeze on real incomes.

Other development

Since U.S. housing credit is normally on fixed interest terms, rising rates do not greatly affect most of the population; and charges for consumer credit are tax-deductible. Part of the strain is therefore borne by public finances—and the public sector deficit is already running far above budgeted levels. In addition, recent surveys have shown a revival in consumer confidence, based apparently on the expectation that the firm U.S. response to recent international tensions will generate higher defence spending. In short, fears of unemployment have been allayed. The recorded savings rate (probably under-recorded) has therefore continued to fall.

Apart from quite robust consumer demand, industrial investment has been supported by other developments. The car industry, paradoxically, is a major spender, since there is a sellers' market for small, frugal cars. Aircraft and electronics are booming even ahead of any defence buying.

Finally, it must be remembered that U.S. competitiveness has improved sharply with the decline of the dollar. The U.S. economy is essentially a post-devaluation economy. Because the appropriate fiscal and monetary policies have not been followed, the change has tended to make the current account worse rather than better until recently. Now, however, the correction of the U.S. trade deficit is a considerable support to activity, even when domestic demand weakens. What is more, the U.S. authorities have remained willing, in an election year, to temper the wind to the victims of such tightening as has been achieved—as witness support for Chrysler, and a number of measures to maintain the flow of housing finance, albeit at a price which new buyers now seem to find a little forbidding.

Little freedom

It still does not seem likely that these combined forces will be enough to prevent a downturn in activity within the next few months. There is no reason to suppose that the leading indicators have become entirely misleading, and the downturn in loan demand since October is especially telling. In addition, it must be remembered that the Administration has little freedom to act to head off a recession; the vulnerability of the dollar in the exchanges is a severe constraint, in spite of the continued though muted support of foreign central banks.

All the same, the robust behaviour of the U.S. consumer, the enthusiastic industrial response to new technology, and the attractiveness of the U.S. market to foreign productive investment does explain why most forecasters are now coming down on the side of a short, shallow recession rather than a long, deep one, provided that the dollar problem can be kept under reasonable control.

East Europe's fears about the Afghan adventure

BY ANTHONY ROBINSON, East Europe Correspondent

ONE of the greatest differences between the invasion of Czechoslovakia and the invasion of Afghanistan is that while the former was formerly a joint Warsaw Pact affair preceded by consultations among the Soviet's East European allies, the latter was a purely Soviet move about which its East European allies were probably not even told.

The difference is significant because in the long run it can be argued that the most important decisions and the most telling effects of the Soviet invasion of Afghanistan will be those affecting Eastern Europe. Until now the Western response to the invasion of Afghanistan has concentrated on how to raise the cost for the Soviet Union itself and on the direct means of bringing pressure to bear on the Soviet Union to make it withdraw from what Gladstone might have described as "the provinces they have desecrated and profaned."

But East-West relations extend far beyond the question of great power relations between the Soviet Union and the U.S.—they also include the question of relations between the West and the Soviet Union's Comecon and Warsaw Pact allies in Eastern Europe.

Eastern Europe's response to the invasion in many ways reflects the apprehension felt throughout those countries about the possible repercussions on their own relations with the West. One indication that Eastern Europe was taken by surprise by the invasion is the delay of nearly a week before the East European countries started to comment on the events. Once they did a clear distinction emerged between the pro-Soviet hardliners—East Germany, Czechoslovakia and, for different reasons, Bulgaria, and the more nationalist and independent-minded East European countries — Romania, Poland and Hungary.

The first group of countries eventually came out with statements of support for the Soviet action as another brilliant example of proletarian internationalism against an Imperialist plot. East Germany and Czechoslovakia, because of their strategic positions and post-war histories, are to all intents and purposes Soviet occupied countries. Their hard line regimes have the least freedom of manoeuvre and have also played the most important flanking role in supporting Soviet global foreign policy initiatives.

Under these circumstances one of the most important decisions likely to face the West *in coming months is* whether or not to count East European countries as an integral part of the Soviet bloc and extent to it the sort of restrictions on grain supplies, fishing rights, trade and finance now being set in motion against the Soviet Union itself. Another point to be considered is whether to treat the bloc as a whole—or to discriminate between the hard line pro-Soviet countries and the reluctant "me-tooers."

The price for any such course would be high on both sides. A return to a new form of cold war in Europe would call into question all the mutual gains made through the Ostpolitik, the four power agreement on Berlin, and more questionably, through the Helsinki agreements. It would also cause considerable problems for western banks, and government export credit institutions which have lent over \$65bn to finance the purchase of western plant and equipment, much of which is to be re-paid through long term compensation deals. A suspension of grain sales to Eastern Europe, which apparently has not yet been considered, would in particular probably cause many more problems to Poland than to the Soviet Union. But Hungary, Czechoslovakia and East Germany all had bad grain harvests last year and the last two countries are also relying on western grain imports this year.

A suspension of grain imports would not cause anyone in Eastern Europe to starve — but it would set in train large-scale animal slaughtering which would cause grave consumer discontent. This might be containable in the long-suffering Soviet Union but would cause grave political problems in Poland.

Restrictions on trade, such as suspension of most favoured nation treatment currently enjoyed by Romania, Poland, Hungary, would also further complicate the life of East European planners already facing considerable debt repayment problems, declining growth rates, inflation and the need for expanded markets in the West to pay for rising OPEC oil import needs.

East Europeans are great listeners to foreign radio programmes and the idea that scarce meat, fewer consumer goods, economic hardship and deteriorating relations with the West were the direct result of Soviet imperialism in Afghanistan could well prove a highly destabilising factor throughout Eastern Europe.

The inevitable result would be renewed repression and a further erosion of the already tenuous popular support enjoyed by most of the regimes in Eastern Europe. Far from Russia being able to withdraw troops from Eastern Europe the Soviet army role as occupation force might have to be strengthened and any hopes of progress on multilateral balanced force reductions (MBFR) and reduction of nuclear weapons held in abeyance.

The willingness of Western governments to apply political restrictions on future economic and financial co-operation with Eastern Europe as in other spheres is most likely, however, be severely tested by the fears of bankers and businessmen that political controls on East bloc lending would raise the risk of default on existing loans and cut export markets at a time of approaching recession.

This *would strike a further* blow at the already shaky international financial situation and would hurt Europe more than the U.S. The bulk of East-bloc lending is by European and Japanese banks. At the same time East Europe is more vulnerable than the Soviet Union which is a major beneficiary from higher gold, oil and raw material prices and has in any case pursued an extremely conservative foreign borrowing programme. Over the past 18 months it has repaid ahead of schedule well over \$1bn and now accounts for only around 20 per cent of total East bloc borrowing.

While all West European governments would be reluctant to reverse the progress made in better relations with countries like Hungary and Poland in particular the most difficult choices will have to be faced by the West German Government. Not only are West German bankers the largest single lenders and West German companies the leading exporters to East Europe but West Germany has the complication of its special relations with East Germany. This is partly economic in that the EEC considers East-West German trade as inner-German trade. This makes East Germany to some extent a honorary member of the Common Market. At the same time West Germany extends a DM 850m interest free annual "swing" credit.

Much of the relative success of the East Germany economy is due to both its privileged market position and the access to West Germany technology which this arrangement gives. But the most delicate political aspects of East-West German relations concerns the slow but steady progress made in improving access to East Germany and East Berlin for West Germans and the four-power agreement which took much of the tension out of the Berlin problem. A return to cold war-type relations could jeopardise both.

One clear sign of the West German desire to keep the lines of communication open was the early announcement that the planned meetings between Chancellor Schmidt and Soviet President Leonid Brezhnev and with the East German state and party chief Herr Erich Honecker would go ahead in spite of events in Afghanistan. This remains the official position but the Moscow visit in particular could well look less and less likely as the overall Western reaction develops.

The initial "business as usual" reaction reflects the strength of the West German commitment to good relations with Eastern Europe and the Soviet Union. It also reflects more subtle fears about the effects which the Soviet Union action in Afghanistan could have in setting off a generalised right-ward shift in Europe and West Germany. Significantly the Soviet propaganda machine has been remarkably restrained in recent months about, for example, the emergence of Franz Josef Strauss as leader of the Christian Democrats. But a return to cold war attitudes could well lead to a resumption of Soviet propaganda warnings about the dangers of "resurgent nazism." This could partially undo the results of more than a decade of patient West German efforts to improve relations with Eastern Europe and the Soviet Union.

Such a climate would also frustrate West European hopes for a more co-operative kind of relationship with the East in the 1980s—especially in the energy field. Most of Western Europe already imports considerable quantities of Soviet oil and gas and several West European countries have expressed interest in linking the East-West electricity grids. France and Italy share these interests and have also had their own special reasons for cultivating closer trade and economic links.

Both countries, for example, have large Communist Parties. But whereas the French party has moved steadily back to a crypto-Stalinist position and expressed only muted criticism of the latest Soviet move, the Italian party has come out with an uncompromisingly critical position, and possibly has hastened the day of that final public break of the Soviet link which many political observers in Italy believe to be necessary if the Italian Communist Party is ever to achieve a share of power in an Italian government.

But the greatest dilemma is now faced by Yugoslavia whose own unique non-alignment abroad and self-management socialism at home has made it the maverick of the world communist movement since 1948.

The invasion of Afghanistan co-incided with an outbreak of fresh fears about the health of President Tito, the man who made history by breaking with Stalin and the Soviet system in 1948. Tito's immense prestige and political skill have fended off many an attempt to bring about a return to the Soviet fold for more than three decades.

But, as Sir Duncan Wilson a former British Ambassador to Belgrade points out in his recent book, *Tito's Yugoslavia*, Tito is also a man with a deep emotional attachment to the Soviet revolution in which he took part as a young man. This has meant that although Tito has nurtured Yugoslav independence he has also striven to keep Yugoslavia a basically socialist country ruled by one party, the League of Communists.

He also took care never to push the Soviet Union too far and established close links with Comecon as well as the Common Market while remaining non-aligned and refusing to join either the Warsaw Pact or NATO.

The younger generation of Yugoslav leaders which will eventually follow him does not share Tito's emotional attachment. On the contrary younger Yugoslavs have tasted the fruits of an increasingly consumer oriented society and have grown up to regard the Soviet Union as a potential threat.

Safeguarding Yugoslav independence without provoking the Soviet Union to precipitate action must now be one of the key issues to be examined by the West. Perhaps the most concrete move in this respect would be for the Common Market to act imaginatively and boldly by concluding the new five-year agreement which has been hanging fire now for nearly two years.

Until now, Yugoslav demands that the Common Market take into account the country's strategic and political importance to the West have fallen on less than sympathetic ears. As a result Yugoslav dependence on Comecon trade has increased. Allowing Yugoslavia greater access to Western markets and other assistance would well be one of the least painful and most constructive of the options now under review.

The unlikely connection: the commodities futures trading floor of the Chicago Board of Trade (*left*) where world prices of grains are settled and Checkpoint Charlie on the border between West and East Berlin, where the state of East-West relations has been measured.

MEN AND MATTERS

Asking for more —just once more

The University College of Buckingham, one of Britain's newest "independent" universities, has spent the last of the £2m on donations with which it was opened in 1976. It is now appealing to industry and foundation trustees for a "once and for all" injection of £3m which appeal director Caryl Ramsden claims confidently will set the college firmly on the road to "permanency."

Although the college is burdened with a heavy overdraft—"far too large for our wishes," Ramsden says—and is still about 200 short of its target of 550 students, this confidence is reflected throughout the administration.

Prof. Alan Peacock, the newly-installed principal tells me: "If we get the £3m it would give us the kind of security on the capital account which would enable us to go for more direct official recognition." This he insists, is "a once-and-for-all effort."

The target is, of course, the Royal Charter which would set the seal on the university's financial and academic future.

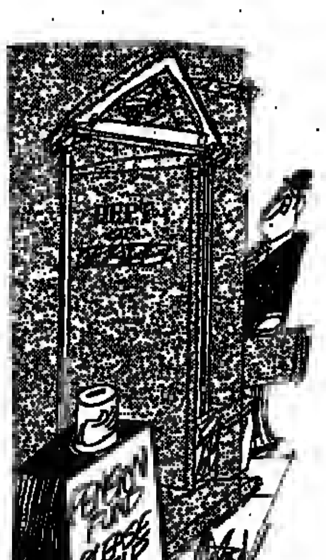
Since the appeal was formally launched in November, the college has been promised a £20,000 gift from Taylor Woodrow, and £10,000 a year for 10 years from the Bernard Sunley Foundation. The appeal committee is somewhat diffident about approaching the founding benefactor, Lord Tanlaw, who gave £1m in the early 1970s, and nothing has yet been heard from other large-scale backers of those days, which included Shell, Beechams and Unilever.

Apart from the general economic difficulties, the college has also suffered painfully in other ways. With the death last week of financial journalist Patrick Hutber the college lost one of its most successful fund-raisers.

Prospects have also been marred by state-financed universities making excursions into fund-raising. "The London School of Economics is trying to raise £2m," says Sir Max Beloff, former principal. "That's like the Ministry of Defence saying 'we haven't enough tanks, can we try to buy some by public subscription,'" he chided.

To date the college has operated very much on a shoestring. Housing students and lecture rooms in converted buildings which range from a redundant Unigate dairy to an 18th century barracks; it has also stuck to a low capital cost syllabus, based on law, economics and accounting.

"We have a strong vocational bias," says Peacock. But he does not rule out expansion into other fields. Talking with fellow academics he says he was surprised that some science teachers felt it might be good if they could get back to the times when students built their own equipment. "They seemed to learn a lot more in those days."



Bone of contention

Civil servants keen to follow instructions and make cuts might sharpen their teeth on that anomalous arm of their own bureaucracy which, according to the Ministry of Agriculture, spent £1.6m of public money on collecting £1m in dog licence fees in 1978-79. The cost of a dog licence, as I keep reminding anyone who will listen, was last raised in 1878 to 37½p. The Ministry reckons the present-day equivalent is £7 to £8.

Uprooting phones

Talks began yesterday between the Post Office and the Channel Islands Telecommunications Board about ensuring that the islands are never again cut off from the outside world.

Just before Christmas the islands' telephone, telex and computer links with the UK mainland was completely severed when two submarine cables were fractured in mid-Channel. "We can only assume," says Deputy John Ellis, president of the Board, "that it was a ship dragging its anchor, but there's no way of proving it."

The only line left was via a small cable link with France, on which calls had to be restricted to three minutes with up to five hours' delay—about par for the course in Upper Volta, but not what Jersey's financial community expects.

Cut off from the international money markets, local bankers, brokers and others resorted to chartering planes and sending emissaries on scheduled flights to the mainland, but the four days' isolation still brought heavy business losses. Yes, concedes Ellis a trifle wearily, there has been a certain amount of screeching by the finance houses: "But we are well aware of the need to have first-class telecommunications to serve the financial centre Jersey has become."

Ever-enthusiastic about high technology, the business community has renewed its demands for Jersey's very own satellite link—an idea discussed by the Telecommunications Board after the cables were first mauled by an anchor in 1977.

The obstacle to that was, and presumably still is, cost; the bill for the telecommunications link between the islands and the mainland is shared equally with the Post Office. A microwave link is another possibility. "We have one between the islands, but once you get over 70 miles you get a lot of fading and crackling," says Ellis.

VAT bandits

Mexican traders with an eye for a "fast peso" were quick to cash in last week when their Government introduced 10 per cent value added tax on many goods and services.

In the few days since it was first applied thousands of indignant complaints about VAT-banditry have poured into the country's consumer protection agency.

Shopkeepers have been accused of charging the tax on exempt articles like unprocessed foods, and some Mexico City taxi drivers have taken to asking passengers for an extra 10 per cent on top of regular fares.

The Government, which has suffered long in its efforts to extract other taxes from the populace, has reacted promptly to the threat to the national exchequer by promising severe action against VAT fiddlers.

Even relatively modest offences such as carrying a double set of books or refusing to give a shopper a VAT receipt will attract fines of between £600 and £12,000—for the worst offenders judges have been empowered to order up to nine years in prison.

Now you see 'em...

"Britain's trade plagued by vanishing invisibles,"—headline from the New York Times.

Observer

Technology: Britain's need for winners

By CHRISTOPHER LORENZ, Management Editor

BRITISH INDUSTRY must introduce new technology into its products and factories faster than other industrialised countries if it is to recover its competitiveness in world markets. Yet it is doing precisely the opposita by neglecting research and development and other parts of the innovation process.

As a result, it is putting at risk the nation's survival as a trading nation, not to speak of hundreds of thousands of jobs—far more than will be lost if trade union resistance and managerial inaction succeed in delaying the adoption of new technology, electronic or otherwise.

This is the gloomy picture to emerga from two new reports, from highly-respected advisory and research bodies, on the threats and opportunities posed by technological change.

The first, published yesterday by the Cabinet Office, is from the Government's Advisory Council for Applied Research and Development (ACARD).* The second, which will appear in tha February issue of the journal Futures, is by Keith Pavitt of the Science Policy Research Unit at the University of Sussex.**

The ACARD report is the third and last in a series which was originally sparked by the last Government's concern about the social and industrial effects of microprocessors. It was prepared by a committee of academics, industrialists and trade unionists.

Their brief was to examine the likely impact of new technology on employment. But, by presenting a much more broadly based *examination of* the social and economic threats and opportunities presented by new technologies—particularly in the fields of energy, materials and biology, as well as electronics—they bave produced a more valuable document than might have been expected.

Set against Pavitt's description of the rapidly emerging strengths of Britain's competitors in these and other fields of technology, the ACARD report presents the case for urgent remedial action on the part of the Government, as well as by industry and the educational world.

One *of its most* controversial suggestions, though in cloaked *form, is* for a return to the policy of "picking likely winners" from among tha most promising industrial sectors, and backing them accordingly. This approach was abandoned as politically unacceptable by the last Government.

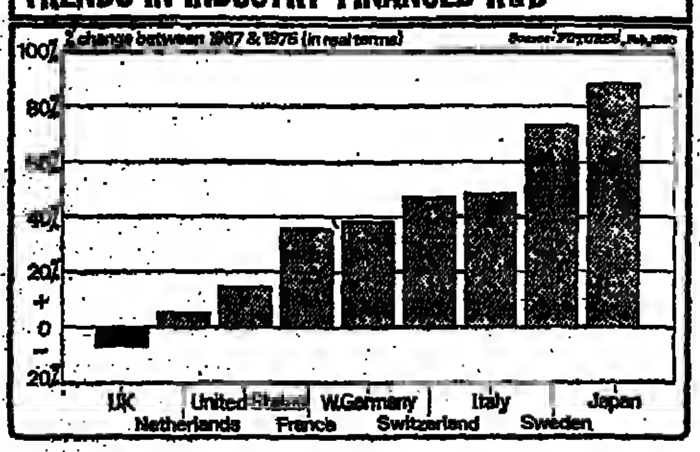
The scope of the ACARD report and Pavitt's study is different; ACARD concentrates on UK *problems* and policy, while Pavitt deals with the entire OECD area, producing a series of graphic national comparisons in which Britain repeatedly comes off worst, except perhapa for Canada.

But together the two reports underline why it is becoming *important* for manufacturing industry throughout tbe West to step np tbe rate of technological innovation, end why government-support programmes are necessary even in e so-called "market economy."

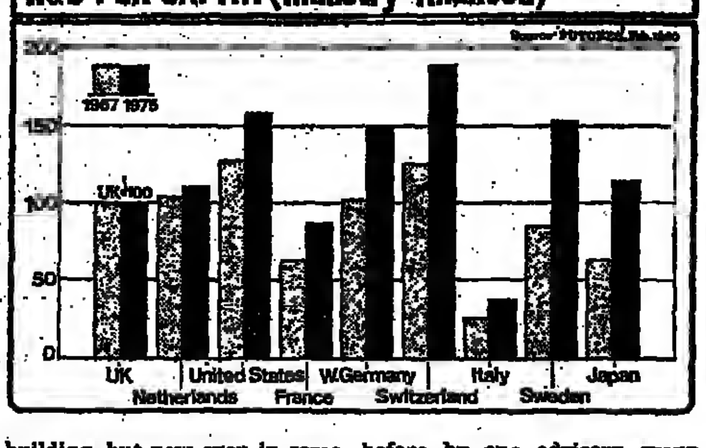
The reason why more innovation is needed is to give a new *lift to* industrial productivity, not only in Britain, but even in those *paragons of industrial* efficiency, Switzerland and West Germany.

The main motives for greater productivity are threefold: the continued increase in labour costs at a very rapid rate; the slowdown in world growth, which is intensifying competition *between the developed* nations; and the increase in competition from low wage-cost Third World countries, especially in the maturer indnstries like steel, cars and shipbuilding, but now even in some areas of chemicals and electronics.

TRENDS IN INDUSTRY-FINANCED R&D



R&D PER CAPITA (Industry-financed)



Among tha additional pressures for greater innovation ACARD cites are the need to save energy, the growing shortage *of certain materials*, and the emergence from tha laboratories of inventions which show great promise for commercial exploitation and the foundation of new industries, such as biotechnology.

Much of this has been said before by one advisory group or another. But the ACARD study is unusual in its provision of a plain man's guide to the complex process by which new wealth and jobs are created, and the role which technology must play in *this process if unemployment* ls to be kept to a minimum in tha 1980s and 1990s.

Amid all the *rhetoric* about the social effects of microprocessors and tbe like, such an explanation has been obviously lacking. With ACARD's help, the managerial and political debate about new *technology may now get on to* a sounder footing, and produce more action to match all the words.

Taking the bull by tha borns, ACARD points out that desirable social improvements can only be achieved if the country generates more wealth. This in turn relies on the creation of marketabla new products, together with increased productivity in the *making of* existing products. Indeed, ACARD warns that "*only by increasing output per* head through the application of labour-saving technology can any employment at all be guaranteed in mature industries in 10 years' time."

Such a policy, it concedes, will reduce employment in existing manufacturing enterprises. Since some of the maturer sectors may also disappear in the *face of Third World* competition. ACARD emphasises the crucial importance of "identifying and fostering" those industries capable of generating substantial new wealth and employment and to "concentrate our efforts" on them ("picking likely winners," in other words).

"*More* unemployment results from (the) loss of market share following a failure to innovate than from the introduction of new technology," the report points out. Conversely, if the introduction of new technology leads *to an increase in the* company's market share, then it can *almost* invariably offer an increase in employment.

ACARD is extremely tactful in the way it disposes of the much-publicised "pessimistic" view about the employment impact of new technology, end in *its esponsal* of the "optimistic" school of thought. But it *is clearly impatient* with speculation about how many millions of people will be "thrown out of work" by microprocessors and other technological demons. Refusing to make any statistical forecast, it *stresses that the net effect on* employment of changes in technology depends on a mass of uncertain variables, including industry's ability to develop new businesses on the basis of those very changes.

For an assessment of British industry's current (in)ability to do any such thing—with a few obvious exceptions, notably the chemical sector—the ACARD study is less comprehensive *than the Sussex research which* Mr. Pavitt reports in Futures.

First, he lays out the statistical evidence behind the argument that innovation—and particularly the development of new products—is becoming an increasingly important generator of economic growth, and of exports in particular.

Indicators

He then plots, and relates together, the long-term trends in a series of economic indicators, to suggest which of 10 leading OECD countries are in the best position to exploit the technological opportunities of tha 1980s. Among the indicators be *uses are productivity*; the overall performance of manufactured exports and their unit value; industry's spending on research and development; the issue of U.S. patents to foreign nationals or companies.

In almost every respect, Britain is in a worse position than the others: Belgium, France, Germany, Japan, Netherlands, Sweden, Switzerland, the U.S. and even Italy. Only Canada challenges the UK for bottom place in what Pavitt calls the Industrial "second division."

The most dramatic difference is *in spending trends on* research and development—one of the most important "innovotive activities" of all. Out of the ten countries, it was only in Britain that the absolute level *of* industry-financed R and *D fell in real* terms between 1967 and 1975; see the top chart.

One of the underlying causes may have been that Britain was the only country to abow a positive association between trends in industrial profitability on tha one hand, and R and D spending on the other. In other words, to quote Pavitt, it was only British industry which treated R and D "as an expendable activity when times were bard, rather than as a necessary investment *for long-term* survival."

The *second chart* illustrates the consequences: in terms of R and D spending per head of population between 1967 and 1975, Britain fell further behind, or was overtaken by, six of the ten countries: Germany, Japan, Netherlands, Sweden, Switzerland and the U.S. France rapidly closed the gap (and *may* now have done so). A depressingly similar pattern emerges from Pavitt's analysis of another indicator of innovative activity, the issue of U.S. patents to foreigners between 1963 and *1975*.

If all these trenda continue, Pavitt suggests, Japan will join Germany, Sweden and Switzerland in the first division of countries with strong capacities for innovation. Netherlands and parbaps tha U.S. may begin to lose some of their strength. In the *second division*, meanwbile, France and Belgium will be working their way steadily towards promotion, wbile Italy, Canada and the UK "will be stuck or declining."

Is there a way out? Provided action is taken soon, both Pavitt and ACARD think there is. But they both reject as inadequate the traditional free-market dogma that the best policy for innovation is simply to create the right economic climate: buoyant demand, high profits, survival of the fittest firms, and the rest.

On its own, such a policy could only work in countries already in the first division, says Pavitt (in fact, all the governments among this elite provide all sorts of incentives for innovation). For poor Britain, threatened even with relegation from the second division, ACARD does argue strongly for greater stability in fiscal, economic and industrial policies. But it is even more *forceful* in support of *specific* government measures to foster those *sectors* most likely to prove "winners" in the technological race.

All of which is not to say that either Pavitt or ACARD absolve industry of any responsibility to pull up its socks on its own. In a few searing paragraphs which every British businessman should read. ACARD demolishes the entire *defensive strategy* employed by so many UK companies in the face of technological competition from abroad, and urges them to go on to the attack.

ACARD suggests that UK manufacturers emulate the aggressive Japanese view, and approach investment decisions on the assumption that they will capture a large percentage of the relevant world market. Such a change in strategy would be welcome, but it would require a revolution in British management's ability to respond quickly to the market, and in its willingness to take risks. It is an alarmingly tall order.

* *Technological Change: Threats and Opportunities for the United Kingdom.* HMSO £1.75.

** *Futures. Published bi-monthly by IPC Science and Technology Press, P.O. Box 6? Westbury House, Bury Street, Guildford, Surrey GU2 5BP. Annual corporate subscription £40 ($104 in U.S.A.); individual sub £26 ($65 in U.S.A.).*

Letters to the Editor

Strategy for Europe

From Mr. G. Bunce

Sir,—I have read with interest the correspondence following my letter of December 12, and I am glad to find some agreement with Mr. Butler (December 14) with my three points at issue, and Mr. Dean (January 2). *I deplore the Green Pound, which* is another form of subsidy, positive for some and negative for others.

As Mr. Wistrich comments (December 22), Mr. Meakin's (December 17) political clout is more noisy than numerically important; and the elected European Parliament will give it only its due consideration. The legislative and fiscal measures Mr. Meakin proposes bave been tried already without success, probably because the financial inducements were not great enough; and there is now no money to spare, as the European Parliament is well aware. Indeed, financial pressure is likely to be *the lever to force* rational discussion and reshaping on the Common Agricultural Policy and all EEC policy.

A realistic new direction will only be found when EEC members accept with common understanding that their fundamental problems derive from the *fact that their policies were* laid down at a time of apparently *indefinite growth*, but are substantially unrealistic and unsuitabla to the realities of the present economic climate.

Radical changes in the EEC were demanded when the post-1974 oil price rises resulted in significant transfer *of* wealth to the Organisation of Petroleum Exporting Countries. EEC members and the West as a whole failed to respond adequately to this situation, and this applies also to the increasing influence of the *newly* industrialised developing countries.

This inflexibility has led to e massive waste of resources: overproduction in agriculture, excess capacity in industries such es steel, textiles and shipbuilding, and high unemployment, are depriving the EEC of tha opportunity to develop *international* trade with newly industrialised countries, where emple low-cost labour woud enable goods to be produced cheaply, if necessary skills and more edvanced products were traded by the EEC. These are the countries with the need and potential for growth; with OPEC countries they demonstrete the new emerging world economic order.

By retention of outmoded policies, failure *to respond to* newly industrialised countries, and *wasted resources*, the EEC demonstrates an introspective capacity *which is self-defeating* and self-destructive. This attitude *applies* to much of Community policies, influences many *industries* and their constituent businesses—agriculture has *many* of the attributes.

Who is to give the lead? My *view* is that it must come from tbe business world.

D. Bunce.

7 Speed House, Barbican, EC2.

Taxman's rights

From the Joint Managing Director Smith and Young

Sir,—Following Mr. A. E. Goodg's letter (Dec. 31), I fully support bis point that Inland Revenne's powers should be brought into line with normal commercial practice.

Not so long ago, my company, a private one, was a couple of weeks overdue in paying our monthly PAYE and NHI cheque. Inland Revenue's collector came, and after we had explained we were temporarily short of cash, it was agreed we would bave a *cheque ready in seven days'* time.

Imagine our surprise when, on the fifth day, bailiffs arrived with a warrant from Inland Revenue with the intention of distraining an equivalent valne on our goods. It so happened that the cheque was ready and signed, but the bailiffs rudely refused it and insisted on a *banker's order*: and sat *on our* premises until it bad been arranged that afternoon *at* considerable inconvenience. To add insult to injury, a collection charge of some £80 was made and bad also to be paid. Our subsequent protests at this treatment were brushed aside.

This is another example of the petty harassment to which businesses, *particularly small* ones, are subjected. If the Government means to belp small firms, this totalitarian practice should be stopped. Inland Revenue should have to go to the Courts as everyone else does.

W. C. Young.

Smith and Young.

40, Crimscott Street, SE1.

Advertising agencies

From the Director General, The Marketing Society

Sir,—As e *former* practitioner myself, now in a position impartially to judge the wider scene, I must react to the extremism of Mr. Sutherland's letter (January 4).

He says that *people* in advertising agenciea are:—"Odd." Compared with wbom? People who write to newspapers? "Narcissistic." Surely such introversion would be incompatible with the opportunism required to "breed on the ignorance and apathy of their *customers*." "Obsessed by what other agencies think of their work." Are not other musicians tha best judges of musical performance? Journalists of other journalism? Efficacy is the *proper* measure of advertising success and *I* have yet to meet the advertising executiva who does not care *far more about* increased client sales (leading *to increased advertising budgets* and increased remuneration) *than* he does about creative awards.

I would agree that British industry (or at least a significant proportion of its smaller components) should wake up—wake up to reservoir of marketing advice which the marketing community, including advertising agencies, has to offer. At least once every fortnight I get a telephone call from yet another struggling company usually because, as is readily volunteered, they "know nothing about marketing" and having spent a lot of money failing to launch a new project without professional support now want help. Sometimes they cannot be helped, sometimes one or more specialist consultancies can be named as likely to be of help.

More often than not discussions can be arranged *with* two or three advertising agencies. In *the process* the invalid usually discovers the cure and although no business may result for the agencies no *complaint has ever been made*.

I agree also that all successful marketing, not just advertising, stems from finding out what appeals to people and acting accordingly.

Perhaps the agencies, in doing just what Mr. Sutherland advises, bave succeeded to a degree which, in his view, makes them parasites. I would *only wish that* more of our industries could make a start towards earning bis censure on the same grounds.

Malcolm Thomas.

The Marketing Society,

Spa House,

11-17, Worple Road, SW19.

Paying for inquiries

From Mrs. S. Forsyth

Sir,—In his article of December 28 Michael Donne expresses concern for the British Airport Authority which will have had three "fights" on its hands in the space of a few months. It will he says "tax it financially . . . which means it will pass the burden on to airlines and passengers."

Unfortunately those of us around Stansted, which has been found by two previous public inquiries to be an unsuitable place for the development of a major airport, bave no such option. Thousands of us in this area have now paid three times on our taxes for civil servants to put forward ideas which have already been rejected twice—bave paid on our rates to the Essex and Hertfordshire County Councils who have been, and continue to be, edamantly against this development.

Now we ara to give of our time, our homes, our money for a third time and we earnestly feel that anxiety is more appropriate for the complete lack of justice this situation represents. Not least we ask at this stage, if the inquiry is to mean anything, what alternatives does the Government eee if the inquiry does not sanction the development at Stansted?

(Mrs.) Susan Forsyth,

North West Essex and

East Herts

Preservation Association,

Fortescues Farm,

Good *Easter, Nr. Chelmsford, Essex*

Employment in small firms

From Mr. E. Woolf

Sir,—In his Lombard column of December 20 Anatole Kaletsky draws our attention to the difference between the growth of employment in small firms in the U.S. and UK respectively.

While his analysis is interesting so far as the poor showing of small firms in the UK is concerned, be overlooks a major critical factor.

For many years computation of PAYE by reference to personal circumstances of employees has masked its true incidence. In fact, by any rational appraisal, PAYE is a corporate burden, and there are many statistics to substantiate *this at both macro and micro* level. For example, wages and salaries heve tended to account for virtually the same proportion of gross national product over the past 30 years or more, irrespective of any changes in rates of "personal" taxation.

Employment-based taxation (including national insurance) falls particularly harshly on small firms. Merely to employ two members of staff, providing them with a take-home pay of, say, £3,000 each, necessitates a total payment to the Inland Revenue in excess of £3,000 in the first year. On this analysis corporation tax becomes irrelevant: it is take-home pay, *after* all, that people are interested in, and it makes no difference to the firm what the tax is called, or by reference to what external factors its computation is based. What metters is where it comes from, and it is the company that writes out the cheques to the Revenna!

Surely the fact that the vast *majority of first-year* bankruptcies are instigated by VAT and PAYE authorities should give a clue to Mr. Kaletsky, and other commentators on our current economic situation.

E. H. Woolf.

20, Chesterford Gardens, Hampstead, NW3.

The value of benefits

From Mr. F. Field, MP

Sir,—Samuel Brittan's pertinent comments (Jan. 3) on the Government's failure to, at the very least, index child benefit helps answer Mr. D. G. Lindsay's letter (Jan. 2). Mr. Lindsay maintains that *the child benefit* scheme has failed both low income families "for whom the level of benefit is inadequate" and middle class families, who have lost their child tax allowances which, bad they continued today, "would have been of significantly greater valne." But *would they?*

Mr. Lindsay manages to miss the big potential of the child benefit scheme which for the first time gives all families, both rich and poor, a fundamental interest in common. I had hoped that the introduction of the scheme would have signalled *the start* of a *really effective* family lobby — and I am still hopeful about this.

What I can't explain is why middla class families have taken so passively (for the moment anyway) the Government's failure to increase child benefit. Before the election the present *Chancellor* promised to view a rise in child benefit in the same *public expenditure terms as the* revenue loss resulting from tax cuts. The Budget cut taxation by £4.5bn, but only £8m went to some children of single parent families. If a Tory Government is prepared to ignore the legitimate needs of its middle class voters, then on what grounds does Mr. Lindsay think child benefit (or family allowances as the scheme was called) would have increased for poor families under a Thatcher Government?

In his article Samuel Brittan also reviewed the debate on breaking the indexation of short term benefits. I disagree with him when he argues that it's "crazy" to drop the index linking of benefits as a back door method of reducing the real value of *short term benefits*. It is surely more than crazy for MPs *to propose* such a move when they have voted to index link their own pay.

Samuel Brittan makes a useful *distinction* in the effect of de-indexing short- and long-term benefits but this distinction only holds if the categories are a true description of two groups of beneficiaries. Sickness benefit is a short term benefit and claimants can qualify after six months for the long term (and more generous) invalidity benefit. Unemployment is viewed as e short term phenomena and there is no long term benefit for claimants once they hava exhausted their right to this short term benefit. To break the link for unemployment benefit (and presumably the *ordinary* supplementary benefit scale rate on which so many unemployed depend) would be a particularly vicious move. Every research report shows that it is the unemployed with children who have the lowest standard of living. Moreover, unemployment benefit bas not been cut in real terms at any time over the last fifty years.

Are tax cuts for the rich and a more rigorous control of wbet is traditionally viewad as public expenditure, more important goals than the level of benefit paid to the unemployed who, on the *Government's own* estimate, will increase in numbers in the foreseeable future?

Frank Field.

House of Commons, SW1.

Installation grants

From Mr. J. Heddle MP

Sir,—Peter O'Connell's "Installation grants for poor f... (December 21) following survey carried out by the National Consumers Council is I think, less than wholly fair.

In answer to a Parliamentary Question I asked on November 19 enquiring why only £3m of a total of £23m allocated had been taken up for home installation, Mr. Geoffrey Finsberg M.P., the Minister of State at the Department of the Environment, said: "Difficulties with the supply of materials during last *winter's industrial disputes* have undoubtedly contributed to the alow take up. But more than 400,000 applications for grants were accepted by local authorities between the start of the scheme in September, 1978 and the end of the financial year. A national Press campaign to publicise changes in the scheme and to encourage take up in the present financial year was launched on November 1. Free leaflets and posters bave been sent to all local anthorities for use in their areas."

Certainly my experience in my constituency tells me that the home installation scheme is well-known, but it is surely too early to judge tha effectiveness of the bome installation scheme 1978 until the full results of the research into its operation are published later this year.

John Heddle.

House of Commons, SW1.

Making a new job

From A. G. Wills

Sir,—Mr. R. C. Owen (December 29) asks for ways to reduce unemployment caused by works closures, etc. For those prepared to move to a *holiday* resort or other suitable place, there is still a great *shortage of good accommodation* to let, in many places.

Small letting businesses, *fortunately* can be started from one's own bome, thus relatively little capital is necessary to get going; also they can normally be run easily by "over-50s" who might bave difficulty in finding other work.

A. G. Wills.

Boulders Mead, Quarr Road, Binstead, Isle of Wight.

Today's Events

GENERAL

UK: Management and staff sides meet to discuss Clegg report on nurses' pay.

General and Municipal Workers Union regional delegate conference opens on local authority manual workers' pay.

Mr. Nikolai *Lunkov*, Soviet Ambassador, visits Brighton marina.

Sir Peter Gadsden, Lord Mayor of London, lunches with Barclays Bank chairman, Lombard Street.

Mr. David Putnam, film producer, speaks on the film industry in the 1980s, at International Advertising Association lunch, London.

Overseas: Mr. Harold Brown, U.S. Defence Secretary, and Mr. Mohamed Hosni Mobarak, Egyptian vice-president, visit China.

European central bankers meet in Basle.

OFFICIAL STATISTICS

Retail sales (November final). Hire purchase and other instalment credit business (November). London clearing bank monthly statement (mid December). UK banks' eligible liabilities, reserve assets, reserve ratios and special deposits (mid December).

COMPANY MEETINGS

Wade Potteries, Manchester Pottery, Burslem, Stoke-on-Trent 12.

COMPANY RESULTS

Final dividends: Investors Capital Trust. Winterbottom Trust. Interim dividends: Peter Black Holdings. Stead and Simpson. Technology Investment Trust.

Brown and Tawse little changed at half year

TAXABLE PROFITS of Brown and Tawse, steel and tube stockbolder and engineer, were little changed at £2.07m for the balf year to September 30, 1979, against £2.03m last time, on sales up from £24.59m to £28.51m.

However, with the company's resources strong and broadly hased, Mr. S. D. Rae, the chairmao, expresses confidence in the full-year outcome.

In the last full year, pre-tax profits were up 15 per cent to £3.81m, oo sales 17 per cent bigher at £49.72m.

Mr. Rae says demand for steel and tube products bas remained steady and sales of hydranlic plant and equipment bave continued at s good level.

	Six months 1979 £000	1978 £000
Sales	28,513	24,591
Trading profit	2,737	2,597
Interest	375	286
Depreciation	287	278
Profit before tax	2,075	2,033
Taxation	1,073	1,057
Net profit	996	976
Preference div.	2	2
Attrib. to ord.	994	974
Ordinary dividends	142	139
Retained	852	835

During the second balf, interest and many other costs have been rising, but sales are being well maintained.

DIVIDENDS ANNOUNCED

		Current payment	Date of payment	Corre-sponding div.	Total for year	Total last year
A. G. Barr		3	—	1.65	4.35	2.41
Brown & Tawse	int.	1.4	April 7	1.3	—	5.8
H. Samnel	int.	0.73	Feb. 1	*0.66	—	*5.2

Dividends shown pence per share net except where otherwise stated. * Equivalent after allowing for scrip issue. † On capital increased by rights and/or acquisition issues.

The first-half result was struck after interest increased from £286,000 to £375,000 and depreciation of £287,000 (£278,000).

After-tax earnings per 25p share are sbown as 9.8p (9.6p), while the net interim dividend is raised from 1.3p to 1.4p—last year's total was 5.8p.

● comment

Despite the slack market and the BSC strike, the outlook for Brown and Tawse is not as gloomy as it is for many other steel stockholders. In the first place the company does not handle steel sheet—the side of the industry where supply beavily outstrips current demand. Secondly, the BSC is not a major supplier of material for B and T's steel pipe business (around 55 per cent group profits) while the growing plant hire subsidiary provides e useful element of diversification. Much, of course, will depend on the length nf the steel strike. A short dispute will have virtually no effect, but if it becomes protracted, B and T's record of 10 years of uninterrupted growth could come to an end. However, with stocks roughly a tenth higher than summer levels, the company sbould be able to ride out a dispute lasting up to eight weeks. In this event, full-year profits sbould be in the region of £4m, indicating e fully-taxed p/e of 6.5 at 124p while the yield is 7.4 per cent assuming a 10 per cent dividend rise.

CMT starts well and making review of performance levels

THE CURRENT year has started encouragingly at the Central Manufacturing and Trading Groop with sales sbowing a marked improvement over the corresponding period of the previous year, ssys Mr. N. A. Hickman, in his first annual statement as chairman.

With the group's extensive range of products constantly being improved, it is well placed to take full edvantage of opportunities as they occur. Despite this, high interest rates still give cause for concern, he edds.

As the level of demand for industrial prodncts in the UK appears static, the group is cootinually reviewing the contribution each of its companies makes to overall profits. Mr. Hickman says that if it is not making a worthwhile return on capital employed and the foreseeahle future looks hleak, the outcome may be reorganisation of tha business.

While this is unpalatahle it is still necessary for a healthier future, be states.

In this respect, the size of the business of Baxters (holts, screws and rivets) has been reduced since the year-end, where low volume of work and uneconomical prices obtained for soma products, coupled with cbeap imports, were major factors in its recent poor results.

Plastech International Designs, bas heen closed and its profitahle product lines merged with those of CMT Wells Kelo. CMT Transport Services ceased to trade at the end of December, 1979, after baving incurred poor trading results.

As already known, pre-tax profits for the year ended July 31, 1979, slipped from £3.73m to £3.66m, on turnover of £74.57m (£60.09m). Tha net dividend is being raised to 3.3p (3p) per 10p share.

The group is engaged in industrial services, light engineering, metal processing, steel stockbolding and tubes, fittings and forgings.

At balance date, group fixed assets reached £21.22m (£14.01m), while net current assets were down slightly at £11.62m (£11.75m). Borrowings increased from £2.13m to £3.62m.

A professional revalnetion of group properties as at July 31, 1979, showed a surplus over book values of £3.42m, which bas heen incorporated in the halance sbeet as at that date.

Meeting, Birmingham, February 1, noon.

THIRD MARINA FOR YULE CATTO

Yule Catto and Co. has agreed to acquire Upton Marina for 400,000 shares and £248,882 cash (subject to adjustment for the 1979 audited results). The vendor has agreed to retain the shares for at least 12 months.

The Marina, at Upton-upon-Severn, will be an important eddition to the two already owned by Yule Catto, Cobb's Quay at Poole, and Hartford Marina near Huntingdon; the three marinas together offer 1,000 floating berths.

H. Samuel trading on target

WITH reasonable trading during the next few weeks, the directors of H. Samnel, jeweller, say that results for the year ended January 31, 1980, should again be setisfactory.

They add that trading in the 11 months to end 1979 was very much in line with their expectations.

Last year the group pushed pre-tax profits from £10.4m to a record £13.43m on a turnover of £65.12m, against £53.92m.

The interim dividend for 1979-1980 is effactively raised to 0.726p net per 25p share, compared with an adjusted 0.66p—last year's final payment was equivalent to 4.54p.

At the balfway stage profits had risen to £3.22m (£2.93m), and the directors said that with the second half making the greater contribution to earnings, the full year should be satisfactory.

BIDS AND DEALS

Globe offers £18m for W of E Trust

BY ARNOLD KRANSDORFF

Globe Investment Trust, the largest investment trust in the UK, has made an agreed bid worth £18m for West of England Trust, an investment services company which owns the Tyndall Group of fund managers.

Glnbe, which merged with Cahle Trust in 1977, has total assets of around £270m, while West's net assets amount to £9m. Tyndall manages funds of about £200m for some 80,000 unit holders.

The terms are £9 of 11½ per cent convertible unsecured loan etock 1990-95 nf Globe for every 10 ordinary shares of 25p each nf West. West's shares were suspended yesterday at 76p pending the announcement.

The bid includes the share capital arising during the offer period on conversion of the £1.5m 10 per cent convertible unsecured loan stock 1990 of West.

There has been a historic association between the two houses for some time. Electra bas e 27 per cent stake in West, while Globe holds 37 per cent of Electra.

Mr. A. E. M. Harbottle, chairman of West, is also e director of Globe.

Mr. Michael Stoddard, a directnr of Globe, described the takeover as a "meeting of minds with the common objective nf developing other areas of money management, particularly overseas."

Mr. Harbottle said the two houses were "complementary investment organisations which would provide a bigger base for development."

Irrevocable undertakings to accept the offer have been given for 6.29m ordinary shares of West owned hy the directors of West and their families, by funds managed by Tyndall and certain other shareholders.

The total number of shares for which the irrevocable undertakings have been given amount to 58 per cent of the capital of West as increased by the conversion of loan stock.

Britannia Arrow has been building up a stake in West and now bolds just under 9 per cent of the equity.

The offer is worth the equivalent of 90p per share. In arriving at the terms, Globe has taken into eccount that West has more than £2.5m in marketahle securities and deposits for long-term investment.

Upon the offer becoming unconditional, e wbolly-owned subsidiary of Globe will be formed. The directors will be Mr. G. J. Ellerton (chairman), wbo is chairman of Electra Group Services; Mr. C. H. Black and Mr. Stoddart, directors of Globe; and Mr. H. G. Leighton and Mr. B. R. Peonerall, directors of West.

The offer is subject to the approval of Globe shareholders at an extraordinary general meeting.

See Lex

SEAGRAM'S HAS 90% OF SANDEMAN

Acceptances of the offers by House of Seagram, wholly-owned subsidiary of Seagram Company, to ecquire the whole of the sbare capital of Geo. G. Sandeman Sons and Co., have been received in respect of 10.26m new ordinary shares, and the sama number of deferred shares, representing 90.7 per cent of the issued share capital. The offers have been made unconditional.

Another wholly-owned subsidiary of Seagram has assented its holding of 700,000 shares to the offers and these shares are included in the overall level of eccептances.

Bibby buys rest of Sterilin for £4.4m

SEEDS AND feeds combine J. Bibby and Sons will ecquire for around £4.4m the outstanding 60 per cent of shares in an associate company, Sterilin, which makes leboratory goods. Sterilin has net assets of £1.87m, and made a pre-tax profit last year of £941,000.

Since Bibby hought a 20 per cent stake in Sterilin in 1977, it has retained an option to buy outstanding share capital on January 1, 1984, unless Sterilin first went public.

Bibhy chairman Mr. Leslie Young says two factors lie behind the decision to make an earlier move. Firstly, Bibby's share price has risen sufficiently since the ending of dividend restraint to make equity financing attractive to both parties. Secondly, the Sterilin board, which controls all the outstanding shares, now prefers the security of joining Bibhy to the vicissitudes of the next four years.

There will be two trancbes of payment. The first, on completion of formalities, comprises 1m Bibby shares and £1.835m unsecured 10 per cent loan notes 1985. Tha second payment, according to e formula based on Sterilin's pre-tax profits to April 30, 1980, will be made within two weeks of certification of the accounts.

Bibby is seeking to acquire more small companies in the medical supplies field, for which it has set up e new division.

NEGRETTI AND ZAMBRA

At an EGM of Negretti and Zambra held on January 2 the resolution to approve the sale of certain assets releting to its industrial division to the British Rototherm Company was passed by shareholders.

Completion of the sale took place yesterday and Negretti has received the first £550,000 of consideration due from British Rototherm. The remaining £750,000 of consideration is payahle hy instalments over the period to March 31, 1981.

Shareholders also passed the resolution approving the sale of certain assets of the company's wholly owned subsidiary, Williamson Manufacturing Company, to a director and former director of Williamson and a company controlled by them.

Tha resolutions to sanction an increase in Negretti and Zambra's borrowing powers were also approved.

BENN BROS. ACQUIRES FARM HOLIDAY

Benn Brothers has ecquired Farm Holiday Guides for £184,500 in cash. Farm Holiday, based in Paisley, Scotland, publishes a series of guide books for family holidays in Britain.

Net tangible assets as at December 31, 1978, were £19,500, and net profit, before tax, for the year ended on that dete was £19,600.

The net profit attributable tn the acquisition will not be significant in relation to the profits of the Benn group for the current year, it is stated.

RIT KEEPS HUME OFFER OPEN

Rothschild Investment Trust which bas been bidding for Hume Holdings through its Orient and General Investments subsidiary, has decided to keep its offer open indefinitely because of the high level of acceptance.

RIT now bas 96.2 per cent of the "A" shares and 82.05 per cent of the "B." In addition it has 98 per cent of the convertible preference shares.

RACAL/ADWEST

Racal Electronics has further increased its stake in Adwest, with its holding amounting to 17.05 per cent et January 2.

Grimshawe Hldgs. in agreed bid for Cindy

Grimshawe Holdings has launched an agreed bid for Cindy, Liverpool-based textile and polyurethane foam company. Cindy bas 80 per cent of the UK market for foam paint rollers, and Grimshawe argues that this will dovetail into its own growing DIY interests.

To finance the deal, Grimshawe will issue 777,538 new 20p ordinary shares. The directors of Cindy will retain 113,000 shares. Carr, Sebag has placed tbe remainder with institutional investors. Grimshawe shares closed last night up 5p at 65p, valuing the bid at around £500,000.

Cindy, a private company, has net tangible assets of some £361,292. Last year pre-tax profits were £89,000.

The acquisition is conditional on approval by Grimshawe shareholders at an extraordinary general meeting set for January 23.

Grimshawe also announces a forecast dividend of 3p for the year to April 30, 1980, against 2p last year.

BOOKER McCONNELL

Booker McConnell's acquisition of Kearley and Tonge, the food wholesaling arm of International Stnres, has cost a total of £10m in cash.

Last year Kearley made losses of £2.2m before interest charges for the 12 months to the end of September. In addition, Booker is taking on responsihility for the £6m of borrowings shown in Kearley's accounts to the end of December.

WATSON & PHILIP ACQUISITIONS

Watson and Philip has acquired James Mutch Foods, a wholly-owned subsidiary of Food Hold, for some £120,000 cash, subject tn contract. This represents around £80,000 of net assets of James Mutch, tha balance being goodwill.

In addition, Heritable Property bas heen purchased from Food Hold for some £65,000 cash, against subject to contract.

NO PROBE

The proposed mergers of Seagram Company with Gao. G. Sandeman, and Allied Sopplier with Caters Supermarkets are not to be referred to the Monopolies Commission.

MINING NEWS

Brascan seeks greater control of Noranda

BY KENNETH MARSTON, MINING EDITOR

CANADA's Brascan group, known and feared for its takeover expertise and financial strength, appears to be determined to seek greater control over the Noranda Mines base-metal major, reports John Soganich from Toronto.

This view stems from the action by Noranda's directors in rejecting the demand by Brascan for two seats on the former's board and one place on the management committee.

Brascan, which acquired a 16 per cent-plus equity in Noranda late in 1979, saw its position decline to 14 per cent as the Noranda management took defensive measures. They resulted in five subsidiary and associated companies pooling their existing Nnranda holdings and buying additional shares through Zinor Holdings which entity ended up with 23.6 per cent of the outstanding Noranda shares.

Noranda is headed by Mr. Alfred Powis, while Brascan is headed by Mr. J. Trevor Eyton who spearheaded the takeover of Brascan early in 1979 by a group formed and financed two-thirds by the Edper/Bronfman interests and one third by the Patino group. Edper Equities has just under 50 per cent of Brascan.

In turning down "e number of demands" by Brascan, Mr. Powis said: "As with most corporations, it's the practice of our board to fill a vacancy by inviting someone whom we feel can contribute significantly to the company's policy and decision making. At the moment no vacancy exists, nor do we feel that acceding to this demand for representation would improve the performance or interests of the company."

Brascan's Mr. Eyton said he was "disappointed and astounded" at the decision. He added that Brascan will "first sit and think and then we will be talking with other shareholders of Noranda and try to enlist their support" in an effort tn dismantle the transactions which resulted in Zinor.

Legal action is not discounted. The stakes are high. Brascan spent almost C$300m (£115m) to acquire its Noranda shares, while the Zinnr participants spent C$266m just to buy 14m shares of Noranda and then pooled another 10m shares into Zinor.

Mr. Powis said that the Noranda board, which is comprised of nine outside directors and three senior officers of the company, gave exhaustive consideration to Brascan's package of demands. Brascan, ba added, had a stated objective of being the largest shareholder exercising an effective voice in Noranda's affairs. His Board concinded that it would be against the best interests of the company that there be any predominant influence in the direction of the affairs of the company.

Mr. Powis added: "There is a very real concern about the pride and morale of middle and junior management if Noranda is perceived to be dominated hy Brascan. There could very well be a serious loss of dedication and effectiveness. As well, there could be an erosion in Noranda's long-standing relationships with customers, suppliers, joint-venture partners, investors, bankers and Government regulators which would have e detrimental effect on Noranda's ability to perform effectively."

He continued: "Brascan, which was taken over by Edper Equities last spring, holds 14 per cent of Noranda's outstanding shares. It also demanded that Noranda dismantle Zinor Holdings, a company which owns 23.6 per cent nf Noranda's shares."

Mr. Powis observed that Zinor was owned by five other public companies, not Noranda, and accordingly its affairs were not governed by Noranda or its directors.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims:—Peter Black, Centreway, Esperanza, Stead and Simpson, Technology Investment Trust.

Finals:—Investors Capital Trust, Winterbottom Trust.

FUTURE DATES

Interims:—	
AGB Research	Jan. 17
Boardman (K.O.)	Jan. 10
Commercial Bank of Australia	Feb. 28
Henderson-Kenton	Jan. 29
Magnet and Southerns	Jan. 16
R.F.D.	Jan. 9
Restmor	Jan. 14
Thorn Electrical	Jan. 11
Finals:—	
Allied Textile	Jan. 30
Gough Cooper	Jan. 15
Imperial Chemical Industries	Feb. 28
Ley's Foundries & Engineering	Jan. 11
Meggitt	Jan. 21
SGB	Jan. 18
Trusthouse Forte	Jan. 18
Warner Estate	Jan. 24
Watson and Philip	Jan. 24

Tin outputs

TIN CONCENTRATE prodnction at the Malaysian-operating Gopeng eased further in December after the high levels obtained in August, Septemher and October. However, tha total for the first three months of the current financial year to September 30 shows up well at 517 tonnes against 492½ tonnes a year ago.

Pengkalen's three-month output amounts to 48 tonnes against only 23½ tonnes in the same period of 1978. Tanjong has completed a good financial year with a total of 226½ tonnes against 190½ tonnes while Idris has produced a 1979 total of 267½ tonnes against 214½ tonnes for 1978.

The latest monthly production figures are compared below.

	Dec. tonnes	Nov. tonnes	Oct. tonnes
Gopeng	151	189½	189½
Tanjong	14½	14	20¼
Idris	19¼	24	28
Pengkalen	15¾	16½	15½

Benguet's new mine opens

THE MAJOR gold producer in the Philippines, Benguet Consolidated, has announced the start-up of a new copper-gold mine which is to produce 60m lb of copper, 100,000 ounces of gold and 220,000 ounces of silver a year.

Benguet's president, Mr. Jaime V. Ongpin, said the project, which cost $106m (£47.4m) and includes a copper concentrator with a daily capacity of 17,000 tonnes, was the corporation's biggest venture in 75 years and will be its single biggest source of income.

Based on current metal prices, a Benguet official said that the new mine, located in Zambales province, north-west of Manila, will give Benguet additional gross earnings of $125m a year.

Until the start of the Zambales project, Benguet's single biggest source of earnings during the past five years was e subsidiary constructinn company with extensive contracts in the Middle East.

Searching for gold in Fiji

AN AMERICAN oil exploration company, Pacific Energy and Minerals of Golden, Colorado, has begun prospecting for gold as well as oil in Fiji.

The company is exploring inland areas of the main island of Viti Levu in a region behind the long-established Vatukoula gold mine. In the name of Aurelia Resources, the company has applied for licences to prospect for precious metals in south-eastern areas of the island, where gold traces have been recorded, according to the Fiji Mineral Resources Department.

The Department said a number of other foreign companies had applied for or were seeking gold prospecting licences. They included Consolidated Gold Fields Australia, which plans to explore the islands of Kadavu and One, 50 miles south of Suva where gold has also been reported.

On Vanua Levu, the second biggest island of Fiji, the Anglo American Corporation Group has completed a year of drilling at the Mount Kasi gold mine site where mining started just before World War Two but subsequently closed owing to the hostilities.

Scottish Investment Trust

DESPITE THE reduction and disappearance of the dollar premium during 1978-79, net asset valne of Scottish Investment Trust Company sbowed a slight improvement over the previous year. This was largely achieved by the company's UK and U.S. investments outperforming their respective markets, says Mr. Angus Grossart, chairman, in his annual statement.

As reported on November 23, net asset valne totalled 128.2p (128.1p) for the year to October 31, 1999. Pre-tax revenue advanced from £4.62m to £5.84m.

The cbairman says that, in the UK, the company redneed its investment in manufacturing industry during the year, while increasing investments in the home improvement, entertainmeot and catering sectors.

The directors have been ettracted to smaller and medium-sized companies which seem to have the ebility to increase their earnings and dividends in difficult economic conditions, he adds.

In the U.S., the company has concentrated on the types of stocks less readily available in the UK market, particularly energy and technology. At the year-end, about 37 per cent and 14 per cent respectively of the U.S. portfolio were in these two sectors, compared with 25 per cent and 9 per cent at the beginning of the year.

The percentage of funds invested in Japan was reduced from 6.5 per cent to 3.5 per cent, mostly as a result of currency and premium movements, the chairman says.

At balance date, investments at valuation were up from £112.9m to £117.3m, of which £75.1m (£65.1m) were quoted in Great Britain and £39m (£43.6m) elsewhere.

During the year overseas borrowings were increased from $17.7m to $28.2m, the chairman says. Shortly before the ending of exchange controls the company reversed its $8m currency swap and reinstated it on identical terms, enabling tha realisation of the dollar premium on a further $8m of U.S. investments which would otherwise heve heen lost.

Meeting, Edinburgh, on January 31 at 11 am.

RANTLODGE/ NATIONWIDE

Rantlodge, a private leisure groop believed to have Swiss backing, is making an unconditional cash bid for Nationwide Leisure, the caravan business. However, the offer is a foregone conclusion as Rantlodge already owns 50.02 per cent of Nationwide.

Control has come from the purchase in early December of the stake beld hy Mr. John Hutchings and his family and private interests which added to Rantlodge's existing 20 per cent bolding.

Mr. Hutchings, wbo has successfully defended Nationwide against two nther predators in recent years, sold his stake for 6p per share and this is the price being offered to the remaining shareholders by Rantlodge. The price values he minority et £650,000.

Rantlodge says that it wants to expand Nationwide's business.

It is currently involved in injecting e holiday business, Club 18/30, into D. M. Lancaster, a textile company in which Rantlodge should end up with 59 per cent. The two leisure interests are regarded as being compatible within Rantlodge.

DIAMOND STYLUS

Labour Pump Company, has acquired 930,070 ordinary shares of Diamond Stylus, representing 29.62 per cent of the equity.

Labour Pump is a wholly-owned subsidiary of Katy Industries, of Illinois, U.S., which owns 50 per cent of Elgin Diamond Products (Europe), the remaining 50 per cent heing owned by Diamond Stylus.

The bolding was formerly held by Mr. E. S. Coathup.

NATL. PLASTICS/ WICANDERS

National Plastics, a division of Courtaulds, has purchased the injection moulding interests of Wicanders (U.K.), the Crawley-based cork manufacturers.

The purchase involves injection moulding and printing machines used in the manufacture of thin walled containers for the dairy industry.

LOW AND BONAR AUSTRALIAN DEAL

The Low and Bonar Group has completed the take-over of Stanger and Co., Melbourne, following approval hy the Australian Foreign Investment Review Board.

SPAIN

January 4	Price %	+ or −
Banco Bilbao	208	+4
Banco Central	230	
Banco Exterior	220	
Banco Hispano	220	
Banco Ind. Cat.	137	
Banco Madrid	175	
Banco Santander	250	
Banco Urquijo	187	−3
Banco Vizcaya	218	
Banco Zaragoza	205	
Dragados	100	
Espanola Zinc	60	
Fecsa	53.2	
Gal. Preciados	28	+1.8
Hidrola	59	−0.7
Iberduero	57.5	
Petroleos	112	−0.5
Petroliber	73	
Sogefisa	115	
Telefonica	54.5	+0.5
Union Elect.	58.2	−0.8

NEW LIFE BUSINESS

Commercial Union life premiums advance by £41m

WORLDWIDE NET new annual premiums of £41.2m in 1979 against £41.9m in 1978 are reported by the Commercial Union Assurance Company, with single premiums of £28.7m against £26.3m.

But allowing for the effect of exchange rate movements and the sale of the majority shareholding in Commercial Union Assurance Company of South Africa, the underlying increase was 7 per cent in new annual premiums and 16 per cent in single premiums. New sums assured amounted to £2.54bn against £2.28bn and new annuities per annum to £74.1m against £75.4m.

In the UK new annual premiums improved by 6 per cent from £17.2m to £18.2m and single premiums by 15 er cent from £4.7m to £5.4m. New sums assured amounted to £1.36bn compared with £1.17bn, while new annuities were £20.8m compared with £22.5m.

The CU achieved a steady rise in the UK in ordinary individual assurances with new annual premiums rising by 12 per cent from £8.1m to £9.1m. Mortgage related business was higher on the year, while straight with-profits savings contracts also showed an improvement.

The self-employed pensions sector was disappointing, in common with most other life companies, but last year was a good year for individual pension arrangements.

The CU reports a large increase in term assurance business providing death cover only, a market in which it offers competative rates.

New group pension annual premiums improved in the UK by 4 per cent from £6.9m to £7.2m, this being natural increases under existing schemes. The augmentation of group pensions accounted for part of the rise in UK single premium business, the rest coming from an increase in single premium self-employed contracts.

In Holland, the main overseas territory for life business, better results were achieved for individual business than for group schemes.

LIFE ASSOCIATION OF SCOTLAND

The Life Association of Scotland, a member of the Nationale Nederlanden Group, reports a successful year in 1979 for both life and pensions business. New annual premiums in the UK and the Republic of Ireland increased by 13 per cent, from £5.1m to £5.75m, while single premiums were marginally higher at £4m compared with £3.9m.

In the UK, new annual premiums were 14 per cent higher at £4.9m against £4.3m, and single premiums were up 30 per cent. Mr. J. M. Souness, the general manager, points out that the main target for 1979 had been to increase life business, since the pensions side was expected to fall following the success in the previous year.

In the event, new life assurance premiums rose by 30 per cent to £1.35m (£1.04m), a large part of the increase coming from mortgage - related business, backed by the company's entry last year into the top-up mortgage market.

Self - employed pensions business was virtually unchanged for annual premium business, but there was a 55 per cent growth in single premiums. New pensions premiums were slightly higher, largely due to increments from existing schemes and to a buoyant market from individual pension arrangements. New annuity business increased five-fold.

GLASGOW FRIENDLY

New policies issued by the City of Glasgow Friendly Society amounted to about 14,000 in 1979 compared with 17,000 the previous year. These assured sums totalling £13.1m, against £11.8m, at annual premiums of £0.58m compared with £0.53m.

Annual premium income rose from £2m to some £2.5m.

GRE shows growth in 1979

A 17 per cent rise in worldwide new annual premiums, from £30.1m to £35.1m in 1979, is reported by the Guardian Royal Exchange Assurance. New single premiums last year advanced by 35 per cent from £14.7m to £19.8m. New sums assured amounted to £2.87bn against £92bn, and new annuities per annum totalled £78m compared with £61.1m.

In the UK, new annual premiums improved by 21 per ceot to £25.5m (£21m), and single premiums were 36 per cent higher at £15.4m (£11.3m). Geoff Nunn, assistant general manager end principal actuary, reports that the successful launch of the GRELLA range of unit-linked life products made a useful contribution to these figures, particularly in the single premium results.

Pensions business remained buoyant in 1979, with annual premiums up by one-third from £10.4m to £13.9m, and single premiums amounting to £2.6m against £700,000.

LONDON LIFE

A 29 per cent rise in new annual premiums in 1979, from £5.13m to £6.59m, is reported by The London Life Association, one of the few life companies that does not pay commission to intermediaries of staff for new business.

Single premiums advanced by almost 40 per cent, from £2.89m to £4.04m, while considerations for immediate annuities improved from £1.95m to £2.10m.

Pension business last year remained buoyant, with group business annual premiums advancing by over 20 per cent and single premiums by over 15 per cent. But, in common with most life companies, there was e slight decline in self-employed pensions business.

Ordinary life business improved by 26 per cent, the increase coming ecross the board, including straight with-profits savings schemes and protection policies.

The company made a satisfactory start to its unit-linked life operations, leunched last April. Its managed fund operations were also successful. It took £732,000 of single premiums and had annual premiums of £136,000 on its linked business, while annual premiums on the managed fund totalled £487,000.

SCOTTISH AMICABLE

The Scottish Amicable Life Assurance Society reports a successful year in 1979 for its managed fund subsidiary SCAMPI, which offers investment management services to pension schemes on an exempt unitised fund basis.

New annual premiums to this fund more than doubled last year from £5.9m to £13.9m, while single premioms advanced fivefold from £3m to £14.5m. Although most of the single premium growth arose from transfers of pensions schemes from the main fund, much of the annual premium improvement came from funds not previously connected with Scottish Amicable.

On the life and pensions business of the company, sales of self-employed pensions contracts were down last year, annual premiums declining by e quarter, and executive pension arrangements remeined et the high level of the previous year.

However, business connected with mortgage repayment rose by 21 per cent, boosted by the company's involvement in the top-up mortgage market. Sales of the flexible endowment Flexidowment were 9 per cent higher, with the new 25-year version being welcomed by the market.

Overall, new annual premiums from all sources improved in 1979 by 2 per cent from £14.7m to £15m and single premiums doubled from £9.6m to £20.6m.

In Australia, new annual premiums rose by e third to £1.2m (£900,000).

SACRET

Mr. M. L. Page, a partner in Peat, Marwick, Mitchell, has been appointed Receiver and Manager of Sacret and Co. of Great Yormeuth, wholesale tobacconist and confecticner.

Mr. Page said Sacret was continuing to trade and he was currently looking for e purchaser.

DE LA RUE

De La Rue Crosfield—a division of the De La Rue Co.—has changed its name to De La Rue Systems. The structure, management and locations of the company remain the same.

Record figures from A. G. Barr

SOFT DRINKS manufacturer A. G. Barr and Company report a record £24.77m turnover for the year ended October 27, 1979. This represents an increase of 15.9 per cent over the previous year. Pre-tax profit increased from £2.01m to £2.52m which is £374,000 above the previous best achieved in 1975/76. Tax charged was £1.12m against £932,000.

Following the change in legislation relating to alloweble dividend increases, a total dividend of 4.25p per 25p share is proposed which represents an increase of almost 77 per cent over the previous year's total of 2.4052p. Stated earnings per share are given as 22.32p

In expressing overall satisfaction with the results, Mr. Robin Barr, chairman and managing director, says the group continued to find margins in the non-returnable trade lower than required for the successful development of that sector on a long-term basis.

Referring to cootainer price increases, the chairman comments that escalating costs of hoth bottles and cans are hampering efforts to achieve better margins, especially on non-returnable business. The returnable bottle position bas been helped by a substantial bottle deposit increase in Scotland.

On future prospects Mr. Barr says that turnover currently is ahead of the corresponding period last year, but costs continue to rise and in some cases at a faster rate than the company's money turnover.

The supply of cans is satisfactory at the moment but obviously dependent eventually upon settlement of the steel strike.

A new location is to be established in Edinburgh following the fire which destroyed the old premises and in the current financial year £1.25m is to be spent on land and buildings in addition to a total of £1.75m on plant and vehicles.

The Barr group, brand leaders of which are Irn-Bru and Tizer, has headquarters in Glasgow, major regional locations in Manchester and London, and a national network of manufacturing, sales and distribution depots.

Recovery in textile shares likely says stockbroker

BY RHYS DAVID

TEXTILE SHARES have fallen too far and could be in for a period of upward correction, claims Laing and Cruickshank, broker, in a report on the sector.

The report by Mr. David Buck, the firm's textile analyst, concludes that as a result of adverse trading conditions in 1979 textile shares are currently at a 40 per cent discount to the average level for industrial shares generally. This compares with an historic discount of around 20 per ceot because of the variebility of the sector.

Mr. Buck suggests that the 27 per cent fall in the textile sector's price relative, which took place in 1979, will begin to be corrected in the light of company results in the first half of this year which may show profit falls less than the market is anticipating.

Though the outlook for trading will still not be encouraging, earnings and dividends in textiles in 1980, are expected to move moch more in line with the average for industry as a whole, following the wide disparity which opened up in 1979. Prospects beyond that for the sector look more encouraging, with some of the factors depressing the textile industry's performance in 1979 no longer so important.

"The removal of exchange controls has limited the possibility of significant upward pressure on sterling, the report states, and while high interest rates and political upheaval in Iran contribute to temporary upward pressures, "we believe there will be e gradual but nndramatic decline in sterling, particularly egainst other EEC countries." The level forecast is U.S.$2.00-$2.10 by March and $1.90-$2.00 by September.

The report also sees a decline in interest rates and argues that because of poor trading conditions textile producers have had to rationalise and become more efficient in advance of many other sectors of industry. And, after 1981, oil prices in the U.S. will heve moved up to world levels, reducing competitive pressure from that source.

Of the six major UK textile groups Laing and Cruickshank recommend Dawson International and Nottingham Manufacturing as buys, the former because of its strong position in luxury products, the letter because of its strong links witb Marks and Spencer. Courtaulds is seen as a recovery share because of the profitability of its rayon business and potential benefits from e strengthening of the dollar against sterling.

Tootal with its international textile iovolvement is also recommended as a longer-term recovery prospects, but doubt is expressed over the growth prospects of both Coets, Paton, and Carrington Viyella.

Brutaub's wool textile export earnings recovered in October to more than £36m, and the industry is now likely to have ended the year with overseas sales again of more than £400m.

Exports in the first 10 months of last year were worth £341.8m, an increase of £4.8m on the same period previously, though volume sales of both cloth and tops (combed wool) were down.

A major portion of Britain's wool textile exports ere now also accounted for by raw wool. In the first 10 months of last year these amounted to £96.1m—a rise of 5 per cent in value and 18 per cent in volume.

THE CAMERA INDUSTRY

Keeping in the picture

BY STEWART FLEMING IN NEW YORK

FOR the past three years, some of the best known Japanese companies have been spending millions of dollars trying to change the way America pictures itself and scoring a considerable success.

During this three year period sales of foreign (overwhelmingly Japanese) manufactured 35mm cameras in the U.S. have soared from just over 1m in 1976 to almost 3m last year, according to estimates.

For years the typical American amateur photographer had heen reluctant to grapple with the complexities of 35mm photography, clinging steadfastly to the push-hutton simplicity of cameras such as the cheaper Kodak pocket models. If it was high technology he craved then that, too, came in a deceptively simple form — initially the Polaroid "instant" camera hut, since 1976, Kodak's rival instant product as well.

The opportunity for the Japanese importers came in the mid-1970s when breakthroughs in electronic technology opened the way for the complex 35mm camera to he redesigned into an automated package requiring the photographer to do little more than focus and shoot. At the same time, as Mr. Ty Govotos of New York stockbrokers Bache points out, rising disposable income allowed the growth of consumer expenditure on the more expensive 35mm product.

Presented with the chance to purchase the quality of the 35mm camera together with simplicity, American consumers, urged on hy a harrage of advertising featuring top sports stars such as John Newcombe and Bruce Jenner, have heen on a huying spree. As a result, the new 35mm automatic cameras produced hy companies such as U.S. market leader Canon, Minolta and latterly Nikon, have grabbed close to a 15 per cent share of the 20m units a year U.S. camera market.

In value terms, their market share is much higher, however, perhaps nearer 40 per cent now, since the average price of the automatic 35mm camera is much higher than that of the cameras aimed at the amateur market, especially when lenses are included.

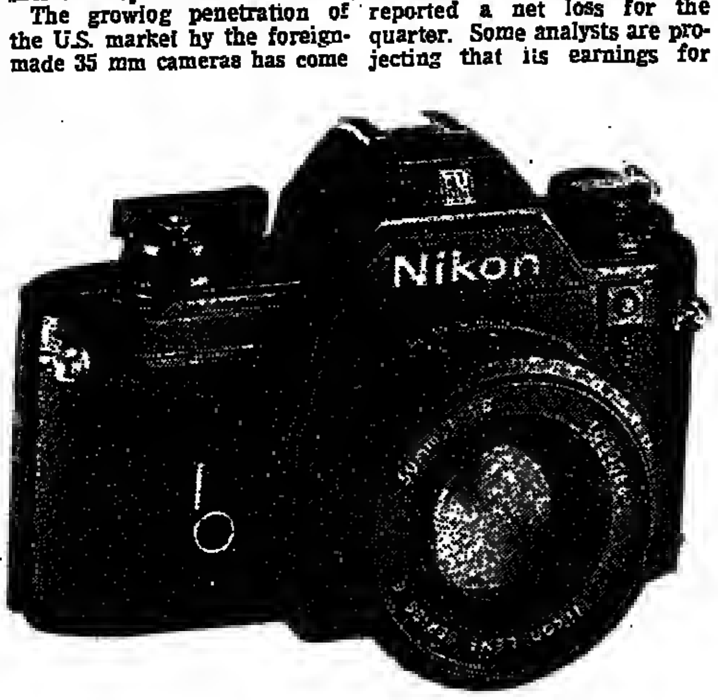
Last year, moreover, as the 1977-78 boom in the U.S. camera market petered out (Ms. Brenda Lee Landry of stockhrokers Merrill Lynch has estimated that unit shipments fell hy around 800,000 to just under 20m) foreign 35 mm shipments increased by around 400,000.

The growing penetration of the U.S. market hy the foreign-made 35 mm cameras has come at a particularly awkward time for the hig U.S. manufacturers, Eastman Kodak and Polaroid.

Ms. Landry estimates that what had heen the most rapidly growing product the U.S. companies offered, the "instant" camera invented hy Polaroid and imitated in 1976 hy Kodak, was the industry's main trouble spot, with unit sales slipping hetween 15-20 per cent to just over 7m.

For Polaroid, the market leader, the challenge is a particularly serious one. The company was once one of Wall Street's most glamorous stocks. Indeed in 1972 its shares were sell'ng at one time for $150 each, and its price earnings multiple hit 98.

In recent weeks, the shares have been languishing at around $28 at the end of a year which has heen filled with had news from the company. Apart from the slowing demand for its staple product, the instant camera, and the accompanying layoffs which the company announced just before the summer, Polaroid has had to admit that its instant movie camera has been a flop. In the third quarter, it had to write off $65m on this project, and reported a net loss for the quarter. Some analysts are projecting that its earnings for 1979 will he halved at around $60m compared with $118.4m on sales of $1.4bn in 1978. With the consumer expected to he squeezed as the economy weakens next year, the outlook for the company is uncertain. Analysts point out, however, that the company is mak'ng determined efforts to come to terms with its prohlems hy, for example, cutting hack its workforce and profits at least are expected to recover next year.



One of the Japanese threats

The immediate prospects for its much larger rival, Kodak, are also poor. The weakening of the instant camera market has meant that in all probability another year will have passed without Kodak earning a profit from its entry into this business, although it was the consolation of knowing that in three years it has grabbed an estimated market share of around one third from Polaroid.

In addition to the recent weakening of demand for photographic products, Kodak has also been squeezed by rising costs and—until the fourth quarter—the inability to pass these on in higher prices because of the Government price control programme. The fivefold surge in silver prices (Kodak is one of the heaviest industrial users consuming an estimated 50m oz a year), has also been eating into its profit margins.

The weakness in its share price last week took the stock to its lowest level since 1978, around $44 at one point. This has been in part a reflection of silver's price rise and the expectation that the company will report a decline in fourth quarter earnings.

Bnt many analysts including Ms Lee and Mr. Goyatos argue that in the longer term Kodak has great strengths. Unlike Polaroid it is a giant corporation with a hroad range of products. In 1978 its sales revennes hit $7bn and its net profit $902m. Earnings in 1979 could he slightly better in spite of expected weakness in the final quarter.

A switch to the profits margin test under the current Administration's price policy is also now permitting Kodak to recover more fully cost increases. It recently announced higher prices for several products including a 40 per cent rise in the price of X-ray film, an important product line.

More important for the longer term however, is the company's diversity—it is hy no means dependent on the amateur photographic market—and its financial, technical and market strength.

While its camera business must suffer from the competition from the Japanese 35mm imports, its much more profitable husiness as a supplier of film (in which it has a virtual monopoly) benefits. It also supplies hospitals and the Government, and has a major chemicals operation with annual sales of $1.5bn.

Perhaps most important, some analysts sense that Kodak has cast off the complacency they saw in the company a few years ago and has become much more determined, and better organised, to capitalise on its strengths.

Noranda in C$240m bid for MacLaren

By Robert Gibbens in Montreal

NORANDA MINES, the mining and industrial group which also has a big stake in the Canadian pulp and paper industry, is bidding C$40 cash per share of MacLaren Power and Paper Company, an old-established newsprint producer in Western Quebec, near the Ontario border.

There are 6.1m A and B MacLaren shares outstanding, putting the value of the hid at over C$240m (US$205m), assuming all the stocks were tendered. Noranda says it is seeking a minimum of 51 per cent of the MacLaren stock, and says the management group, accounting for about 27 per cent of the outstanding shares, has already accepted the hid.

However, there are also other major holdings held hy members of the MacLaren family and also the Webster interests of F.P. Publications of Toronto.

Noranda offers the alternative of eleven of its own shares for every six of MacLaren. No change in management would be made if the bid succeeds as most observers think it will.

MacLaren is a medium-sized pulp and paper company which has weathered the last three industry cycles very successfully. The stock had been trading around C$23 to C$24 a share in the market.

Despite its heavy stake in cyclical industries such as forest products and copper, lead and zinc mining and refining, Noranda has large interests in manufacturing wire and cable and has the major holding in Canadian Hunter, finder of the deep basin natural gas field on the northern Alberta-British Columbia border.

This area is now being developed hy Hunter and others. Imperial Oil (Exxon) has farmed into the Hunter acreage committing more than C$100m to development.

Noranda is also a leader in fibre optics research in Canada and also research into hydrogen.

Its associates include three big mining companies Placer Development and Kerr Addison, Brenda Mines and Brunswick Mining and also Fraser Inc. the New Brunswick pulp and paper group. Its partner in several forest products operations is Mead Corporation of the U.S.

Noranda also has mining and metal interests in the U.S. and Latin America and major uranium reserves in Canada and Australia.

UAW agrees to modify Chrysler deal

DETROIT — Mr. Douglas Fraser, the president of the United Auto Workers Union (UAW) has announced a tentative agreement with Chrysler Corporation on modifications to the three-year contract covering Chrysler workers in the U.S.

The modifications, which now amount to $446m in concessions by the Union, are subject to ratification hy UAW members, which is expected hy the end of January, said Mr. Fraser.

The modifications, required hy Congress when it passed the Federal loan guarantee aid for the company, mean the union has added $243m to the $203m it gave up when the contract was ratified last November.

Mr. Fraser said the $446m was his union's share of the total $462.5m in concessions required of all unions holding contracts with Chrysler.

Reuter

Gold fever checks trading in Eurobonds

By Francis Ghilès

AS GOLD closed in London last night at $630 an ounce after rising $40 during the day and touching at one point a high of $640, investors interested in Eurobonds were absent, except where some of the sterling denominated issues floated before 1979 are concerned.

Dollar hond prices drifted down by about ¼ of a point across the board in thin trading. The eight-year $40m stright issue for the European Coal and Steel Community which was priced at 99¾ after the indicated coupon was lifted from 11⅛ to 11¼ per cent was signed yesterday. Lead manager of this issue is Nomura Securities and the bond yields 11.55 per cent to maturity.

The previous issue for the ECSC, launched through Goldman Sachs three weeks ago, is now trading at 97¾ at which level it yields 12 per cent. However, this issue includes a bullet moturity of 10 years, whereas the latest ECSC issue runs for eight years and includes an average life of 6½ years.

In the Deutsche-Mark sector prices ended the day mixed in thin trading.

Connecticut General offer meets more opposition

BY STEWART FLEMING IN NEW YORK

CONNECTICUT GENERAL Corporation's hopes of completing a proposed $480m takeover of ERC Corporation, a leading Kansas City hased reinsurance concern, darkened over the weekend when the Missouri Insurance Department announced its opposition to the deal.

Connecticut General has so far given no indication of how it will respond to this move, whether to appeal against the decision, withdrawn or press ahead.

The Missouri Department has said that it has reached its decision partly hecause it felt the proposal was not good for competition in Missouri but also, it said, because of expressions of opposition from insurance companies who do business with ERC and do not want to ee it swallowed up by a firm which is a direct competitor.

Bnt in the hackground, it is known that ERC itself has steadfastly opposed the Connecticut hid, preferin ga rival offer from a fast growing oil company, Charter.

Approval of several State insurance regulators would be required for the Connecticut General proposal to go ahead, but the opopsition of one is not necessarily something which could automatically halt the proposal.

Connecticut General said yesterday that it is still reviewing courses of action available to it following the Missouri decision.

Charter has offered $90 a share in subordinated debenture stock for some 43 per cent of ERC in a deal which values the total ERC equity at around $547m.

$1m Ford Pinto trial defence

BY IAN HARGREAVES IN NEW YORK

FORD MOTOR Company is understood to he spending nearly $1m on its defence in a state trial in which it faces charges that it was recklessly homicidal in its design of the fuel storage system in its Pinto model cars.

Jury selectin for the trial, due to open formally this week and expected to last two months, began yesterday.

The trial, which follows a string of civil hearings on related cases, is based on an accident in Indiana in August 1978 when three young women were hurned to death after their Pinto's petrol tank exploded following a rear-end collision.

Ford has maintained that the 1.9m Pintos produced between 1971 and 1976 were as safe as any other passenger car and that they met all Federal safety requirements.

Extra rear-end protection was built into Pintos prodnced since 1976, following a change in Federal regulations. Ford sold ahout 180,000 modified Pintos last year, hnt the controversy surrounding the model has been an important factor in the company's poor performance in the small car end of the U.S. market.

The trial is being held in Winamac, Indiana, a small town selected as a neutral location following protests by Ford against holding the hearings in the county where the three women died.

Although Ford faces a maximum fine of only $10,000 on each count of reckless homicide if found guilty, the successful defence of the action is considered important to its image and possihly to the outcome of other civil cases, several of which Ford has already lost with resultont heavy damages.

VW America dispute spreads

BY OUR NEW YORK STAFF

VOLKSWAGEN of America was yesterday virtually shut down as the effects of a pay dispute at its West Virginia body stamping plant spread to its main assemhly centre in Pennsylvania.

The company sent assemhly line workers home after the completion of the first Monday shift on the line which normally turns ont around 1,000 Rabhits (known in Europe as the Golf) each day.

Although Volkswagen has heen hit by a numher of unofficial strikes since it began assembling cars in the U.S. four years ago, the strike over wages at the hody stamping plant is thought to be the first official union action

Mr. Ray Ross, regional director of the United Autoworkers Union, said the union was in dispnte with the company about a wide range of pay and fringe benefit components of a proposed three-year pay contract.

FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond-issues for which an adequate secondary market exists. For further details of these or other bonds see the complete list of Eurobond prices published on the second Monday of each month.

Closing prices on January 7

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Alcoa of Australia 10 89	60	89¼	89¾	−0½	−0⅞	11.88
Alex Howden XW 9½ 81	30	77	79	0	0	13.34
Australian Res. 9¾ 84...	30	91½	92	+0⅛	0	12.04
Avco O/S Cap. 10¾ 87	40	†82½	83	−0½	−0⅛	14.14
Beneficial Fin. 9¾ 87 ...	100	89¾	90¼	−0⅛	−0⅜	11.80
CECA Gr. Rate 10⅛ 91	150	83⅜	83⅞	−0⅛	−1	12.20
CECA 9¾ 99	125	†80⅝	81⅛	0	−0⅛	12.72
Canadian Pacific 9¾ 89	50	89⅜	89⅞	−0⅛	−0⅛	11.60
Carter Hawley 9¾ 86 ...	50	89⅜	89⅞	−0½	−0⅜	12.12
Comalco Inv. E. 10⅜ 91	40	90	90½	−0⅛	−0⅜	11.82
Continental Grp. 9¾ 86	100	89⅝	90⅛	−0⅛	−0⅜	11.89
Dome Petroleum 10 94	50	89¼	89¾	−0⅛	−0⅛	11.52
Dominion Bridge 10⅛ 84	30	94½	95	−0⅛	−0⅛	11.79
Dow Chem. O/S 9⅝ 94	200	86½	87	−0⅛	−0⅞	11.56
EIB 9⅞ 87	150	90⅞	91½	−0½	−1⅛	12.04
EIB 10 99	150	85¾	86¼	−0½	−1	12.25
EIB 10⅜ 87	100	92½	93	0	−0⅛	11.97
EIB 10.15 99	100	87⅛	87⅝	+0⅛	−0⅛	12.17
Export Dv. Cpn. 9⅝ 84	100	91⅜	91⅞	−0⅛	−0⅛	11.90
Export Dv. Cpn. 9¾ 94	150	92⅞	93⅜	0	−0½	11.72
Finland 9⅝ 89	100	87⅝	88⅛	+0⅛	−0⅜	12.15
GTE Finance 9⅜ 84 ...	50	92⅝	93⅛	0	0	11.70
GTE Finance 9¾ 89 ...	55	88⅜	88⅞	0	−0⅛	11.78
[illegible] 9¾ 88	100	88⅞	89⅛	0	−0⅛	11.75
Gould Int. Fin. 9¾ 85...	50	92	92½	0	−0⅛	11.83
Hudson Bay Co. 10 94	50	88⅝	89⅛	−0⅛	−1⅛	11.63
ITT Antilles 9⅝ 89	75	86⅜	86⅞	0	−0⅛	11.98
Kennecott Int. 9½ 86...	100	86⅞	87⅜	−0⅛	−0⅛	12.63
Manitoba 9½ 89	75	[illegible]	87	−0⅛	−1⅛	11.94
Michelin 10 94	125	97⅞	88⅛	0	−0⅛	11.74
Nat. Des. Telecm. 9½ 86	100	[illegible]	[illegible]	−0⅛	−0⅛	11.71
New Brunswick 9¾ 94	75	85½	86	−0½	−0⅞	11.87
Newfoundland 10 94 ...	50	[illegible]	[illegible]	0	−0⅞	11.50
Norges Komm. 9⅞ 99...	100	85⅝	86⅛	−0⅛	−1⅛	12.09
Norway 9½ 84	150	92½	93	0	−0⅛	11.70
Nova Scotia Pwr. 9¾ 89	60	87½	88	−0⅛	−0⅞	11.97
Occidental Fin. 10⅜ 84	50	93½	94	−0⅛	−0⅞	12.12
Orient Leasing 9½ 86 ...	25	87⅝	88⅛	−0⅛	−0⅞	12.29
Pennwalt O/S F. 9¾ 84	25	91⅞	92⅜	−0⅛	−0⅛	12.12
Pepsico Cap. 9⅝ 84 ...	100	92½	93	+0⅛	−0⅛	11.52
Quebec Hydro 10 99 ...	75	86⅛	86⅝	0	−0⅞	11.80
Sears Roebuck 9 82 ...	150	93⅝	94⅛	−0⅛	−0⅛	12.45
Statoil 9¾ 89	100	88½	89	0	−0⅞	11.61
Sweden 9¾ 89	100	88½	89	−0⅛	−0⅛	11.78
Sweden 9⅞ 88	200	90⅞	91⅜	−0⅛	−0⅞	11.91
Sweden 9¾ 84	100	92⅞	93⅜	0	+0⅛	11.73
Unilever NV 9¾ 87	100	88	88½	0	−0⅛	11.66
Warner-Lambert 9 94 ...	100	90⅞	91⅜	0	−0⅛	11.61

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
African Dev. Bk. 8 87...	100	98	98½	0	0	8.30
Argentina 7½ 89	150	93⅝	94⅛	−0½	−1⅛	8.47
Asian Dev. Bk. 7⅛ 89...	100	94⅝	95⅛	−0⅛	−0⅛	8.03
Banco Desarrollo 7⅛ 89	100	93⅞	94⅜	−0⅛	−1	8.59
Barclays O'seas 6¾ 89	100	95⅝	96⅛	0	+0⅛	7.37
Brazil 8 87	150	96⅜	96⅞	−0⅛	−0⅞	8.83
CECA 7 91	150	93⅝	94⅛	−0⅛	−0⅛	7.81
Council of Eur. 7⅛ 89...	100	95⅜	95⅞	−0⅛	−0⅜	7.90
EEC 7⅞ 94	225	98⅝	99	+0⅛	−0⅛	0.03
EIB 7½ 89	200	97⅞	98⅜	0	−0⅛	7.76
Eletrobras-Brazil 7. 87...	100	93⅞	94⅜	+0½	+1⅛	8.15
Eurofima 6½ 89	100	96⅜	96⅞	+0⅛	+0⅛	7.03
Kobe, City of 7⅛ 89 ...	150	97⅜	98⅛	0	−0⅛	7.45
Mitsubishi Chem. 6½ 94	70	96½	97	−0⅛	−0⅛	7.43
Neder. Gasunie 8 88...	100	103½	104	+0⅛	−0⅞	7.28
New Zealand 7⅛ 87 ...	200	98⅜	98⅞	−0⅛	0	7.38
Nippon Kokan 6½ 84 ...	100	95⅜	95⅞	0	−0½	7.78
Nippon Tel. & T. 5⅞ 87	100	89	89⅜	−0⅛	−1½	7.68
Norges Komm. 7⅜ 91...	150	101	101½	+0⅛	+0⅛	7.56
Norges Komm. 6⅝ 94...	150	101⅜	101⅞	+0⅛	−0⅜	0.06
Norway 6⅜ 84	200	97½	98⅛	−0⅛	−0⅛	6.83
OKB 8 87	40	90	91	+0⅛	+0⅛	7.90
OKB 7⅛ 89	100	97⅜	98⅛	0	−0⅜	7.69
Tokyo Elec. Pwr. 6½ 85	200	95⅜	95⅞	−0½	−0⅞	7.49
World Bank 7¾ 91	400	97⅞	98⅜	−0½	−0⅛	7.98

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Argentina 5⅞ 89	80	95⅝	96	+0⅛	−0⅛	0.08
Aumar 5 89	60	94⅛	94⅝	+0⅛	+0½	6.76
Australia 3¾ 89	250	90⅝	91	−0⅛	−0⅜	4.87
Bergen, City of 4¾ 91...	40	95½	96	0	−1	5.25
BNOE 5 89	75	89¼	89½	−0⅛	−0⅛	6.82
BMW Overseas 4⅜ 91...	100	95⅜	96	−0½	−0⅜	4.71
Caisse Nat. Tele. 4⅜ 89	100	96⅝	97	0	−0⅜	4.78
Canada 3¾ 89	300	92⅜	92½	−0⅛	+0½	4.66
Copenhagen 4½ 91	60	94⅝	95	−0½	0	5.09
Council of Eur. 5 89 ...	100	96⅛	96⅝	+0½	−0⅛	5.47
EIB 4⅜ 91	100	90	90½	−0⅞	−0⅞	5.68
EIB 4⅜ 84	100	88	88½	0	−0½	5.57
Elet. de France 4⅜ 89...	100	97½	98	+0½	−0⅛	4.87
GZB 4⅝ 89	100	90⅞	91⅜	−1⅛	−2	5.42
Hild 4½ 91	35	96	97	−0⅛	−1½	4.94
ICI Fin. NV 3½ 94	230	80½	81	−0⅛	−0⅜	5.49
Int.-Amer. Dev. 4½ 89	100	90	90½	−1	−1⅛	5.85
Malaysia 5 89	80	90	90½	−0½	−0⅞	6.37
Nippon Tel. & T. 4⅜ 89	100	95½	96	−0⅜	−0⅜	4.80
Nordic Bank 5 89	45	100⅛	100⅝	+0½	0	4.96
Norges Komm. 4½ 91...	100	93⅝	94⅛	−0⅛	−1⅛	8.06
OKB 3⅞ 91	100	†84⅞	84⅞	−0½	−1⅛	5.67
OKB 4⅛ 91	100	89½	90	−0⅛	−0⅞	5.58
Oslo, City of 4⅜ 91 ...	100	89⅝	90⅛	−0⅛	−0⅜	5.55
Shikoku El. Pwr. 4⅜ 89	100	98	98⅛	0	−0½	5.00
Spain 4 91	100	88	88⅝	+0⅛	−0⅞	5.41
Staweeg 4¾ 91	60	96½	97	−0⅛	+0⅛	5.13
Voest-Alpine 4⅜ 89......	90	98½	99	0	+1⅛	4.92
World Bank 4⅜ 89	100	97½	89	−0⅛	+0⅛	4.92
World Bank 4⅜ 89	150	94	94½	−0⅜	−1⅛	5.14
World Bank 4⅜ 91	100	93⅛	93⅝	−0⅛	−0⅛	5.41

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 6.6 83	30	89½	90⅛	0	+0⅞	2.88
Australia 6½ 89	20	84⅝	95⅛	0	+0⅛	8.13
EIB 7⅛ 89	12	89	99	−0½	+0½	7.97
Finland 6.6 83	10	88⅝	89⅝	0	0	9.12
Finland 6.8 89	10	87⅞	88⅛	+0⅛	−1	8.00

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Avco Fin. 10⅞ 86 C$ ...	25	89	89½	−0¼	+0¼	13.05
Bell Canada 10⅜ 86 C$	60	93⅛	93⅝	0	0	12.22
Cr. Foncier 10⅜ 94 C$	30	90½	91	−0⅛	+0⅛	13.10
Ex. Dev. Cpn. 10 84 C$	60	92⅜	92⅞	+0½	+0⅛	12.24
Fst. Can. Inv. 10 84 C$	50	91⅛	91⅝	+0⅛	0	12.91
Hudson Bay 10½ 89 C$	60	88⅝	90⅛	−0⅛	−0⅛	12.37
Quebec 10⅛ 86 C$	50	91	91½	−0½	0	12.30
R. Bk. Canada 10 86 C$	40	92⅛	92⅝	0	−0⅛	11.74
R. Bk. Canada 10 94 C$	40	85⅜	85⅞	0	−0⅛	12.14
Copenhagen 8⅜ 91 EUA	25	†91½	93	0	0	9.38
Copenhagen 8⅜ 91 EUA	20	†98⅞	99⅜	0	−0½	8.84
SOFTE 8⅞ 89 EUA	40	†88½	90	0	−0⅛	10.06
Algemene Bk. 8⅜ 84 Fl	75	97⅜	97⅞	−0½	+0⅛	8.94
Amev 8½ 86 Fl	75	98	98½	+0½	+0½	8.84
Ned. Middbk. 8⅝ 84 Fl	75	96½	97	+0⅛	+0⅛	9.19
Norway 8¾ 84 Fl	100	96⅞	96⅜	0	+0⅛	9.39
Norway 8⅜ 84 Fl	100	96	96½	0	0	9.24
Rabobank 8 84 Fl	25	100½	101	+0⅛	+0½	8.79
Air France 11 84 FFr ...	120	97⅜	98⅛	0	0	11.47
Euratom 9¾ 87 FFr	150	85⅛	86⅛	−0½	−0⅛	12.81
Finland 11 84 FFr.........	20	96⅞	96⅛	−0⅛	−0⅜	12.23
Finland 11½ 89 FFr	70	94	95	−0⅛	−0⅜	12.48
Gaz de France 11 84 FFr	150	97⅛	98⅛	0	−0⅛	11.65
Norway [illegible] 84 FFr	200	89½	90½	0	−0⅛	12.48
Renault 9¾ 85 FFr	100	88⅜	89⅜	−0½	−0⅛	12.53
Saint-Gobain 9¾ 86 FFr	130	85⅛	86⅛	−0⅛	−0⅜	13.13
Solvay et Cie 9¾ 87 FFr	125	83⅛	84⅛	0	−0⅛	13.38
Total Oil 9¾ 87 FFr......	150	82⅝	83⅝	0	−0⅛	13.12
EIB 11½ 91 £	25	87	87¾	+0⅛	−0⅞	13.72
Finance for Ind. 13 91 £	15	95½	96½	+0⅛	+0⅛	13.72
Fin. for Ind. 12½ 89 £	30	92⅝	93⅜	+0⅛	+0⅛	13.53
Gen. Elec. Co. 12½ 89 £	60	92½	93¼	−0⅛	+0⅛	13.89
Indonesia 8¾ 81 KD ...	7	†93½	94	0	0	8.86
Mitsubishi 7½ 84 KD ...	10	†95⅛	96⅞	0	0	8.68
Norges Kom. 7½ 89 KD	12	†93⅜	93⅞	0	0	8.60
Occidental 8¾ 81 KD ...	7	†90⅛	90⅝	0	0	8.65
Akzo 9¾ 87 LuxFr	500	†94⅞	95⅜	0	−0⅛	10.15
Euratom 8 87 LuxFr ...	500	90⅛	91⅛	0	0	9.73
Oslo, City of 8 89 LuxFr	500	89⅛	90⅛	0	−0⅛	9.63
Volvo 9¾ 87 LuxFr	500	98⅜	99⅜	0	+0⅛	9.98

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
Banco di Roma Int. 8 87	0⅛	99⅜	100⅛	29/4	15⅝	15.77
Banco Prov. BA 7¾ 86...	0⅛	96⅞	97⅜	5/8	14½	14.95
Banco Urquijo 8 86......	0⅛	97⅛	97⅝	21/3	13⅜	13.74
Bank of Ireland 5¾ 89...	‡0⅛	96⅞	97⅜	21/2	15.69	16.16
Bank of Tokyo 5¾ 89 ...	‡0⅛	97⅞	98⅜	25/1	18.18	16.50
Bergen Bk. A/S 0 89 ...	‡0⅛	95⅞	96⅜	29/2	14.31	14.89
Bque. Indo Suez 5¾ 89	0⅛	98	98½	11/1	11	11.20
BNP 5½ 81	0⅛	97	97⅛	22/2	11.94	12.28
Citicorp O/S F. 6 94 ...	‡0⅛	96½	98	0/3	14.44	14.62
Citicorp O/S F. 83	§‡0	99½	100	23/2	15⅛	15.16
Citicorp O/S F. 84	‡0	98⅞	99⅜	29/2	15	15.13
Co-operative Bk. 8 86...	0⅛	97⅜	98⅛	15/5	15.06	15.37
Creditanstalt 5½ 91	§‡0⅛	97⅜	98⅛	14/3	14⅞	15.18
CNT 5¾ 86	§0⅛	98⅜	99⅜	10/4	15.18	15.28
GZB 5½ 89	‡0⅛	98⅝	99⅛	1/2	16.18	16.37
Jugobanka 8 89	0⅛	94⅝	95⅛	23/5	16	18.84
Ind. Bank Japan 5¾ 87	0⅛	97	97½	15/4	14⅛	14.65
LTCB Japan 5⅝ 86	0⅛	97⅛	97⅝	13/6	14⅛	14.60
LTCB Japan 5⅝ 89	0⅛	97⅛	97⅝	7/6	14.19	14.55
Mfrs. Han. O/S 5¾ 94...	‡0⅛	98⅜	98⅞	29/2	10.81	14.01
Nacional Fin. 6¾ 89 ...	0⅛	97⅜	97⅞	25/1	11½	11.78
Nat. West. 5¾ 94	§0⅛	87⅞	98⅛	11/1	14.84	15.24
Nippon Cred. Bk. 6½ 86	0⅛	97⅛	97⅝	12/1	10⅞	11.16
Royal Bk. Scot. 5¾ 84 ...	§‡0⅛	98⅛	98⅝	11/1	14.94	15.18
Soc. C. de Boue. 6½ 87	0⅛	96½	87	3/4	13⅜	13.70
Sogenal 5¾ 89	§0⅛	96⅛	96⅝	11/1	10.81	11.20
Sweden 8⅛ 91	‡0⅛	†97⅛	97⅝	18/1	15	15.38
TVO Pwr. 8 81 (0-lock)	0⅛	97⅜	97⅞	24/5	15.31	15.88
Utd. Overseas Bk. 8 89	‡0⅛	87	97½	29/3	15.31	15.76
Williams & Glyn 5⅝ 91	0⅛	96½	87	14/3	10	13.44
Bq. E. d'Alg. 4¾ 89 SF	0⅛	98	98½	18/0	6.69	6.95

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
AGA Akt'bolag 7¾ 89...	10/79	145	99	100	0	−7.90
Alco Int. Fin. 9½ 94 ...	1/80	40	91⅞	92	−0⅛	13.19
Asahi Optical 7 94	11/79	605	94⅛	95½	+1½	7.18
Canon 6¾ 94	8/79	570	105⅝	106⅞	−0⅜	−2.21
Ciba-Geigy O/S F. 4 94	9/79	675	88½	89⅜	+0⅛	−2.36
Credit Suisse 4¾ 93 ...	10/79	1325	107⅞	108⅜	+0⅛	−0.29
Daiei Inc. 6½ 94	11/79	1020	97⅞	98⅜	+0⅛	3.75
Esselte 7¾ 89	8/79	159	93	94½	+0⅛	−2.10
Honda Motor 5½ 89 ...	5/79	532	103½	104⅜	−0½	−3.25
LPC Internatnl. 6 89 ...	8/79	35	89⅛	100½	+0⅛	8.39
Meidensha Elec. 7 94...	12/79	210	94⅝	95⅛	+0⅛	17.74
Mitsubishi Cp. 6½ 94...	10/79	604	123½	125	+1⅛	11.20
Nippon Seiko 7¾ 94 ...	12/79	339	92⅝	93⅞	−0⅛	2.93
Nitto Elec. Ind. 9 94 ...	7/79	735	85⅛	86½	−0⅛	11.46
Toshiba Cpn. 7¾ 94 ...	10/79	198	98	99	+0⅛	6.22
Union Bk. Switz. 5 89...	2/80	125	108⅜	111½	−0⅛	9.38
Fujitsu 5 84 DM	7/79	475	100½	101⅞	−0⅛	16.65
Kansai Elec. 4 84 DM...	4/79	1234	86⅝	87⅝	0	48.61
Tokyu Ld. Cp. 4 89 DM	4/79	493	79⅛	80⅞	+0½	50.76
Uny Co. 6¾ 86 DM ...	11/79	1071	98⅜	99⅜	−0⅛	23.10

* No information available—previous day's price.
† Only one market maker supplied a price.

Straight Bonds: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

Floating Rate Notes: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn=The current coupon. C.yld=The current yield.

Convertible Bonds: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

Swissair expects further dip in profits

BY JOHN WICKS IN ZURICH

SWISSAIR expects to report slightly lower profits for 1979 following the decline of just under 5 per cent at the net level in 1978.

In a New Year address to staff, Mr. Armin Baltensweiler, the airline's president, said that a number of features had combined to compress the operating surplus for 1979. A small increase in output, brought about by the addition of two DC-9-51 aircraft to the fleet and the simultaneous phasing out of one DC-9-32 airliner, had "been thwarted by the "unreasonable" grounding of the DC-10s causing Swissair a net loss of SwFr 15m ($9.55m). Damage would have been "far worse" had the airline not been flexible.

On top of the DC-10 grounding, there was a Swissair DC-8 accident in Athens on October 7.

As for expenditure, this had been increasingly affected by the rising price of aviatinn spirit—today it costs twice as much as a year ago, with "no end of the spiral in sight." An improvement in yields from fuel-related tariff adjustments had mede themselves felt only in the past few months, Mr. Baltensweiler stressed.

Swissair booked only a slight increase in load factor for the year. The small rise in production involved increasing staff by 300, meaning the airline's first decline in prodnetivity per worker since 1960. However, Mr. Baltensweiler pointed to the "less negative" impact from foreign-exchange influences. The situation had stabilised particularly in the second half of 1979, he said.

One favourable influence dnring the year was a low requirement for depreciation. Depreciation volume would, bowever, rise sharply again in future with the introduction of the DC-9-80s, the Airbus and the new B-747 aircraft. It would be necessary to improve the gross profits in order to achieve an adeqnate return on capital and allow funds for exceptional write-offs.

Looking at 1980, Mr. Baltensweiler said Swissair's bill would rise by some SwFr 100m ($63.7m) over the year. He expressed aerions concern at the fuel outlook: Swissoir might have to reckon with "real supply bottlenecks" and the price would continne to rise. For 1980 alone the oirline has bndgeted SwFr 500m ($318.5m) for fuel. A price cbange in aviation spirit of a single centime meant extra costs, or savings, of SwFr 11m ($7m).

In 1978 the airline's operetional profits eased to SwFr 244.4m while net earnings dipped 4.8 per cent to SwFr. 49.4m.

* * *

SWISS textile machinery manufacturer Maschinenfabrik Rieter expects a fall in net profits for the year ended October 31, 1979, of some 15 per cent. Operating profits are stated in the company's bonse magazine to bave fallen fast and are termed "unsatisfactory," although the setback was partially offset by income from participations and securities.

Rieter, whose non-consolidated turnover for 1977-78 was SwFr 301m, is again expecting sales of about SwFr 300m ($190m). Production value decreased by some 10 per cent to SwFr 261m.

Increased sales from Karstadt

By Our Financial Staff

INCREASED sales are reported for 1979 by Karstadt, the major West German department store which is the largest retail chain in Europe.

Exclnding VAT, group sales rose by 9.4 per cent last year to DM 9.25n ($5.4bn), or by 3 per cent in real terms adjusting for new selling space. After nine months of 1979 sales from existing floor space wera running some 2.7 per cent ahead.

The npturn in the final three months has plainly been aided by peak season volnme during the run-up to Christmas. Last year Karstadt increased fluor space by 4.1 per cent to 1.2m square metres.

The company has yet to disclose profit figures. At the nine-month stage it indicated that capital spending on new selling area had substantially eaten into profit margins.

In 1978 Karstadt's net earnings fell to DM 66.2m from DM 70m following start-up costs and the integration of losses from the mail order group, Neckerman, in which Karstadt took a controlling stake in 1977.

Group profits were running at a peak DM 152m net in 1975.

Major survey of Italian companies

By Paul Betts in Rome

MEDIOBANCA, one of Italy's leading medium-term special credit institutes, bas produced a major survey of some 160 Italian companies operating in Italy. The two volumes published today by Mediobanca's "R an S" subsidiary, contain details on company performances including, among other informotion, shareholdings, financial results, company indebtedness and manufacturing activties.

DEMINEX

Facing up to tough targets

BY JON FEDLER

FORMED 10 years ago, West Germany's national oil exploration group, Deminex, still bas far to go before achieving its goal of providing the country with significant and secure crude oil supplies.

In 1979, supplies of oil from its own production plna buy-back oil amounted to 1.7m tonnes, comprising over 1.6m tonnes from the group's 41 per cent bolding in the UK North Sea Thistle Field and 65,000 tonnes from fields acquired in the U.S. earlier this year with the takeover of the American company, Cresleau Oil.

Despite some recent successes, Dr. Ernst E. Hotz, the company chairman, notes the continning "inadequate self-supply base of our shareholders, and the resultant higher average crude oil procurement costs compared with those of our international competitors."

The group's target, ootlined at a recent Press conference, is to secure 10m tonnes a year from its own crude oil sources during the second half of the 1980s. This would be equal to a third of the current refining capacity of Deminex' shareholders, Veba (54 per cent), Union Rheinische Braunkohlen Kraftstoff and Wintershall (18.5 per cent each) and Saarbergwerke (9 per cent).

To achieve this, Deminex is looking to two regions in particular—the North Sea and the Middle East-North Africa.

By the mid-1980s, the group expects to obtain some 4.4 to 5m tonnes of production or buy-back oil from Thistle, and from two fields dne to come on stream in 1981. These are the UK's North Sea Beatrice Field (Deminex shares 22 per cent) and Block EE 85 in the eastern part of the Gulf of Suez, in which Deminex is the operator.

The group is cautiously optimistic about developing several other North Sea blocks in which

By the second half of this decade Deminex hopes to have increased supplies of crude oil to around 10m tonnes, or by more than five times the level of supplies achieved in 1979.

it has shares, including Block 34/4 offshore of Norway and UK Block 3/7o, both of which are oil-bearing. It is bidding for shares in concessions to be awarded in Norwoy's coming fifth round and will bid in the next UK round too—probably in co-operation with the British National Oil Corporation, with whom it bas worked closely in the past.

The company will continne its practice of buying into promising or already-producing fields, or acquiring shares in companies which own such assets, says Dr. Hotz. But, citing the scramble recently to acqnire the Belridge Oil Company in the U.S. (which Deminex first joined, then withdrew from) he says the trend to scarcity on the world oil market and fears about security of supplies following events in Iran have "increasingly sharpened the competition for available reserves."

Nearly 30 per cent of Deminex investment has been in the Sea, and this is expected to reach one-third by the end of 1984.

The other focal point of activity will be North Africa and the Middle East. Productioo from the EE85 Gulf of Suez field is expected to start in 1981, reaching a peak of 2m tonnes (obout 14.8m barrels) annually in 1982-83. The field's reserves are estimated at 160m barrels.

On the western side of the Gulf of Suez, in Block LL 87, production tests are under way to determine whether oil finds made in the past two years can be economically developed. As in the case of EE85, Deminex is operator in the early stages, with BP and Shell as eqnal (33 per cent) partners. If prodnction goes ahead, the consortium will hold a 50 per cent share in the production company, along with the stote-owned Egyptian General Petroleum Corporation.

In Libya, Deminex last month acquired a 70,000 square kilometer onshore concession, in return for a pledge to spend at least $100m on exploration. The deal was accompanied by Libyon pledges of increased oil supplies for Veba Oel, and negotiation are currently in progress.

SCREG sees sharp upturn

THE FRENCH public works group, Societe Chimique, Routiere et d'Entreprises Generales (SCREG), expects to post a net consolidated profit for 1979 of more than FFr 60m ($15m), compared with FFr 34m in 1978, AP-DJ reports from Paris.

Gross cash flow is expected to be about FFr 290m, np from FFr 240m.

Consolidated turnover last year is estimated at FFr 6.7bn, an increase of just under 10 per cent on the 1978 total of FFr 6.1bn. Foreign contracts accounted for 38 per cent of the 1979 total.

The company said the board intended to substantially increase its dividend so that its shares would yield more than 10 per cent on the basia of the current share price.

SCREG shares closed ot FFr 132 on the Paris Stock Exchange on Friday. The company poid a gross dividend of FFr 12.75 in the 1978 financial year.

Plessey again delays decision on subsidiary

By Jimmy Burns in Lisbon

PLESSEY, the UK electronics and telecommunications company, has again postponed a decision on the future of its troubled Portuguese subsidiary, Plessey Portuguesa.

The company said yesterday that an initial round of talks between Plessey and the Portuguese authorities had gone better than expected and thot the company had agreed to a further extension of the original December 20 deadline for an agreement on the company's future in Portugal. Plessey was reported to have threatened to wind up its subsidiary's operations unless the Portuguese agreed to a cut in the company's 3,500 work force.

The recently formed centre right Government is believed to have agreed in principle to a rationalisation of Plessey's labour force, although the details will not be ironed out until a further meeting in Lisbon next Monday. Plessey's negotiating team will be led, as before, by Mr. Warren Sinsheimer, the group's deputy chief executive.

Plessey Portuguesa bas 60 per cent of Portugal's switchbing equipment and is the main supplier of telaphones to CTT/TLP, the state telepbone compony.

New chief for Air Portugal

By Our Lisbon Correspondent

A FORMER Minister for Industry, Sr. Fernando Dos Santos Martins, is to be chairman of Air Portugal, the State-owned airline. He repleces Sr. Alvaro Barreto, the Minister for Industry in the recently formed centre-right coalition Government.

Sr. Martin's appointment is the company's seventh Board reshuffle since the 1974 revolution and coincides with a particularly critical period in the company's history.

The airline is still awaiting a firm Government decision on a financial restructuring scheme aimed at putting Air Portugal on a profitable basis by the mid-1980s. Air Portugal's financial difficulties were aggravated last month by a week-long strike during the peak Christmas period. The strike cost the airline an estimated Es 280m ($5.6m) in lost revenues and jeopardised its strenuous efforts to become truly competitive on the international market.

Advance by Woolworths South Africa

By Jim Jones in Johannesburg

FROM TRADING ahead of what was expected to be the best Christmas ever, the South African retail chain Woolworths reported a 13.3 per cent increase in first-half turnover to R83.7m ($100.8m) for the 26 weeks to November 29, 1979. This compares with R73.9m for the corresponding period of 1978.

However, competition in the sector remained intense. This is reflected by the fact that net income before tax recorded an advance of only 13.4 per cent to R11.33m, against 1978's R9.98m.

The interim results benefited from operations at two newly opened stores, with the group now operating 65 outlets nationwide. A further store is planned to open before the end of the current financial year. Even so, the management's philosophy is to upgrade and enlarge existing outlets, rather than to aim for higher market penetration by the opening of new stores.

This policy, it is felt, will result in better control of group overheads.

From interim earnings of 23 cents a share, up from 20.3 cents, a 10 cent interim dividend has been declared, against 8 cents. During the year to May 1, 1979, earnings per share were 51.7 cents, and dividends totalling 22 cents were paid.

UMAL in Mineral Deposits dispute

BY JAMES FORTH IN SYDNEY

UTAH MINING Australia Ltd. (UMAL) is at loggerheads with the Sydney Stock Exchange as to whether the company should make an offer to acquire the minority shareholdings in the beach sand minerals group Mineral Deposits.

The argument has been going on since last September, when UMAL bought Titanium Alloy Manufacturing Company (Tamco) for A$16m (U.S.$17.8m) from NL Industries of New York (formerly National Lead). Tamco's assets included an 84.9 per cent shareholding in Mineral Deposits and 70 per cent of the aluminium die casting group Doehler Australia.

Tamco also owned 90 per cent of the petroleum services group Baroid Australia, but this was sold back to NL. The Sydney exchange contacted UMAL within days of the Tamco purchase, and asked whether the company proposed to fulfill its moral obligation to make an offer to the remaining minority holders. The exchange also asked what price had been attributed to the Tamco shareholding in Mineral Deposits.

UMAL replied that it had not bought shares in Mineral Deposits, but in Tamco, which included the Mineral Deposits' stake among its assets.

UMAL said that the query about the price attributed to Mineral Deposits' shares did not call for an answer, and that the question of extending an offer to minority holders had not been considered. An exchange of letters between the parties followed, and these were released yesterday by the Sydney Exchange.

The Sydney Exchange referred to a listing requirement "which sets out the principle that minority shareholders should receive a comparable offer in writing when effective control of a company is transferred." This requirement, the Exchange claimed, put a moral obligation on UMAL, although it had not directly bought shares in Mineral Deposits.

On November 26, the UMAL directors wrote to the Exchange and said that it had made a number of incorrect assertions. UMAL said that the listing requirement imposed a responsibility on the directors controlling the company which sold the shares, and that NL did not impose any conditions on UMAL. "In the case of the Tamco acquisition, there was neither another listed company involved nor any other shares to buy."

UMAL also said that the Exchange had no right to further information on price, and that it was "going well beyond your brief to suggest lack of moral responsibility on the part of UMAL and/or its directors."

But the UMAL board said that it would consider making an offer to minority holders. The Sydney exchange then said that it was concerned that the market in Mineral Deposits' shares was uninformed, and asked for a decision by 5 p.m. on December 12.

On December 7, UMAL replied that it would not comply with the exchange's "ultimatum and deadline." The directors said they did not concede the demand for an offer, which was "unsupportable and unreasonable." This latter letter was released yesterday, apparently inadvertently, whereupon the exchange released all of the correspondence.

Mineral Deposits' shares were priced at A$1.15 when the Tamco sale was announced last September. Yesterday they closed in Sydney at A$1.45.

Intl. Harvester Australia profit

BY OUR SYDNEY CORRESPONDENT

INTERNATIONAL Harvester Australia staged a recovery in the year to October 31, converting a loss of A$3.5m to a profit of A$6.44m (US$7.2m). The turnround followed increased sales of farm machinery and heavy trucks, and is in line with the experience of another agricultural equipment group, Massey Ferguson (Australia) which reported a turnround from a loss of $A6.3m to a profit of A$974,000.

All of International Harvesters' divisions showed healthy sales increases, with the truck section again contributing most to group turnover. Total sales rose by 25 per cent to A$276.5m ($US307.2m), with truck division sales up by 12 per cent to A$162m. The group has been able to boost truck sales, despite static conditions within the motor industry, by increasing its market penetration.

Group profit included a contribution of A$4.25m from the finance offshoot, International Harvester Credit Corporation of Australia, up slightly from the previous year's A$4.1m.

The directors said that the group's improvement could continue throughout the current year. Given some stability in the economy, the increasing acceptance of the company's product range and the benefits from organisational changes and efforts to improve efficiency, they see 1980 as a year of continued growth and prosperity for the company.

The profit performance of 1978-79 was achieved in highly competitive and price-conscious markets, the directors said. A significant contribution came from the favourable influence of new heavy-duty truck sales, while the recovery in the rural sector generated an improvement in agricultural equipment sales. Cost control and cost reduction programmes contributed to the improved result.

Dead Sea Works trebles earnings

By L. Daniel in Tel Aviv

DEAD SEA Works, an Israel-government-controlled company, experienced a 210 per cent jump in net profit during the first half of the current fiscal year. This rate of increase was double the rise in the cost of living index (about 100 per cent), and more than double the 90 per cent rate of devaluation of the Israel-pound during the period under review.

Net profit reached I£579m ($16.5m) against I£187m a year earlier. The company produced 629,000 tonnes of potash in April/September 1979, and sold 702,000 tonnes, most of this on foreign markets. Its foreign currency income rose to $38m. This was due not only to the larger quantity shipped, but also to the higher prices of potash on world markets.

The company is, therefore, paying an interim dividend of 20 per cent and distributing bonus shares at the rate of 30 per cent. The bonus shares will be allotted first, so that recipients will be entitled to the cash dividend on the new shares as well as on those held previously.

Limited growth for Yeo Hiap

By Wong Sulong in Kuala Lumpur

A PRE-TAX profit of 10.5m ringgits (US$4.8m) has been reported by Yeo Hiap Seng Malaysia, the food and drinks group, for the year ended September 1979.

This represents an 18 per cent rise over the previous year, and is somewhat disappointing compared with growth rates of 60 per cent and 220 per cent during the previous two years.

Further rise in sales of Israeli dollar bonds

BY OUR TEL AVIV CORRESPONDENT

SALES OF Israeli-Government dollar bonds in 1979 increased by $24.7m over the preceeding year to reach $394.5m. This is the fifth consecutive year that dollar bond sales have increased. Since the launching of the Israel bond drive almost 30 years ago, over $4.7bn of such bonds have been placed, with roughly half of this amount already redeemed.

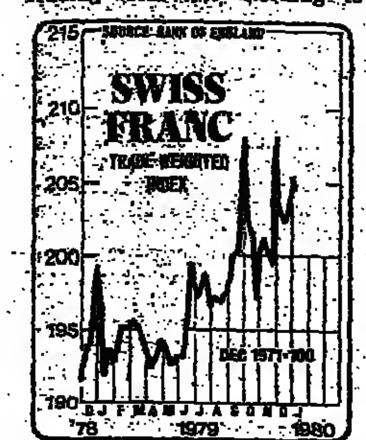
The proceeds of the bond sales are used to assist Israel's economic development in general, and the development of its infrastructure in particular. This year, the emphasis will be on the construction of roads, communications and water and sewage facilities in the Negev,

Companies and Markets

CURRENCIES, MONEY AND GOLD

Sterling firm

Sterling improved against all major currencies yesterday, with demand boosted by better than expected figures for the Wholesale Prices Index. The rise in December of 0.75 per cent was considerably less than the 1-to-1.5 per cent range expected by the market. On Bank of England figures its trade weighted index rose to 70.8 from 70.2 on Friday, having stood at 70.4 at noon and in the morning. Against the dollar it opened at $2.2475 and touched $2.2615 before coming back to $2.2435. Trading from late morning to



mid-afternoon took place around $2.2475, but demand increased later in the day with sterling reaching a best level of $2.2670. It closed at $2.2615-2.2625, a rise of 2.45c.

The dollar finished above its worst levels for the day, but was still well below Friday's closing levels. Apprehension over the situation in Iran and Afghanistan saw the U.S. unit fall to DM 1.7080 from DM 1.7110 against the D-mark, and to SwFr 1.5695 against SwFr 1.5775 in terms of the Swiss franc. The Japanese yen continued to improve, helped by the settlement of fresh oil contracts with Iran, and the U.S. unit fell to Y231.5, its lowest level since October 19, and compared with Friday's close of Y234.5. On Bank of England figures, the dollar's trade weighted index fell from 84.4 to 84.0.

FRANKFURT—There was no intervention by the Bundesbank yesterday when the dollar was fixed lower at DM 1.7108 compared with DM 1.7155 on Friday. Trading was fairly quiet, with the rise in gold having less influence on the currency than the previous week. Market factors remain unchanged, with the situation in the Middle East outweighing any favourable economic factors coming from the U.S.

PARIS—The dollar was lower at the fixing at FFr 4.0095 compared with FFr 4.0205 on Friday, while sterling rose to FFr 9.0200 from FFr 8.9950. The French franc remained the most improved currency within the EMS, and showed a slight overall gain against its EMS partners.

MILAN — The sharp increase in the price of bullion appeared to depress the U.S. dollar, and it fell to L800.95 at the fixing compared with L802.95 on Friday. Elsewhere sterling rose to L1,801.30 from L1,796.90 and the Swiss franc was firmer at L508.28 against L507.95. EMS currencies showed a slightly weaker tendency, with the D-mark at L468.39 from L468.50, and the Dutch guilder firmer at L423.38 against L423.77.

TOKYO — The dollar fell sharply against the yen yesterday, with confidence sapped by the continuing dispute over Iran and the situation in Afghanistan. The yen was aided by the recent settlement of oil contracts with Iran. The U.S. unit opened at Y234.80 and sank to a low of Y233.75, but traded in a fairly narrow range for the rest of the day. There was no intervention by the Bank of Japan, and the dollar finished at Y233.90, considerably weaker than Friday's close of Y237.45.

THE POUND SPOT AND FORWARD

Jan. 7	Day's Spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	2.2345-2.2670	2.2615-2.2625	0.45-0.35c pm	2.12	1.14-1.03 pm	1.91
Canada	2.6200-2.6485	2.6435-2.6445	0.80-0.70c pm	3.40	1.86-1.75 pm	2.72
Nethlnd.	4.22-4.28½	4.27-4.28	2-1c pm	4.21	5-4 pm	4.21
Belgium	62.35-63.00	62.85-62.95	20-10c pm	2.86	45-35 pm	2.54
Denmark	11.99-12.09	12.07½-12.08½	½ore pm-1½ dis	-0.74	2¼-4¼ dis	-1.24
Ireland	1.0405-1.0495	1.047-1.0485	par-0.10p dis	-0.57	0.11-0.21dis	-0.61
W. Ger.	3.82½-3.88	3.86-3.87	3½-2½pf pm	8.31	8½-7½ pm	8.15
Portugal	111.30-112.30	111.90-112.20	15-65c dis	-4.28	40-140 dis	-3.21
Spain	148.35-149.50	149.35-149.45	45-85c dis	-5.62	105-205 dis	-4.15
Italy	1799-1812	1810½-1811½	6-8lire dis	-4.64	17-20 dis	-4.09
Norway	10.99-11.11	11.09½-11.10½	5-3ore pm	4.32	10¼-8¼ pm	3.51
France	8.99½-9.08	9.06-9.07	3-2c pm	3.31	6½-5½ pm	2.65
Sweden	9.27½-9.35½	9.33½-9.34½	3½-1½ore pm	3.21	7½-5½ pm	2.78
Japan	520-530	523-524	4.45-4.15y pm	9.86	10.80-10.50pm	8.14
Austria	27.55-27.90	27.80-27.85	18-8gro pm	5.61	52-42 pm	6.78
Switz.	3.51½-3.58½	3.54½-3.55½	4½-3½c pm	12.24	9½-8½ pm	10.42

Belgian rate is for convertible francs. Financial franc 64.95-65.05. Six-month forward dollar 2.00-1.90c pm. 12-month 3.93-3.83c pm.

THE DOLLAR SPOT AND FORWARD

Jan. 7	Day's Spread	Close	One month	% p.a.	Three months	% p.a.
UK†	2.2345-2.2670	2.2615-2.2625	0.45-0.35c pm	2.12	1.13-1.03 pm	1.91
Ireland†	2.1550-2.1600	2.1570-2.1590	0.45-0.35c pm	2.22	1.60-1.50 pm	2.87
Canada	1.1665-1.1670	1.1674-1.1677	0.16-0.12c pm	1.44	0.21-0.17 pm	0.65
Nethlnd.	1.8885-1.8925	1.8900-1.8910	0.41-0.35c pm	2.41	1.12-1.02 pm	2.26
Belgium	27.75-27.85	27.80-27.82	9½-1c pm	0.76	3-1 pm	0.29
Denmark	5.3400-5.3490	5.3400-5.3415	0.80-1.30ore dis	-2.36	4-4.50 dis	-3.18
W. Ger.	1.7050-1.7130	1.7075-1.7085	1.10-1.00pf pm	7.38	2.72-2.62 pm	6.25
Portugal	49.45-49.60	49.50-49.57	15-25c dis	-4.84	45-75 dis	-4.84
Spain	66.00-66.12	66.04-66.08	35-50c dis	-7.72	85-100 dis	-5.60
Italy	800.50-802	800.6/-801.20	4-6lire dis	-7.49	11.5-13 dis	-6.12
Norway	4.9080-4.9110	4.9090-4.9100	0.95-0.45ore pm	1.71	2.35-1.85 pm	1.71
France	4.0075-4.0140	4.0100-4.0120	0.60-0.50c pm	1.64	0.75-0.55 pm	0.65
Sweden	4.1280-4.1320	4.1300-4.1310	0.75-0.55ore pm	1.89	1.25-1.05 pm	1.11
Japan	231.40-234.00	231.45-231.55	1.60-1.45y pm	7.90	3.70-3.55 pm	6.26
Austria	12.29-12.31	12.29½-12.30½	5-3gro pm	3.90	17-13 pm	4.88
Switz.	1.5660-1.5800	1.5690-1.5700	1.43-1.38c pm	10.74	3.41-3.36 pm	8.63

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency.

CURRENCY RATES

Jan. 4	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	17	0.591820	0.646262
U.S. $	12	1.32108	1.44698
Canadian $	14	1.54689	1.69187
Austria Sch.	3¾	16.2889	17.8415
Belgian F.	10½	36.8581	40.3568
Danish K.	11	7.07769	7.76006
D Mark	6	2.26631	2.48041
Guilder	9½	2.50411	2.74161
French Fr.	9½	5.31140	5.81651
Lira	15	1060.95	1161.93
Yen	6¼	316.767	345.151
Norwgn. Kr.	9	6.49707	7.11915
Spanish Pts.	8	87.6122	95.6529
Swedish Kr.	9	5.47689	5.99441
Swiss Fr.	2	2.08061	2.28840

CURRENCY MOVEMENTS

Jan. 7	Bank of England Index	Morgan Guaranty changes %
Sterling	70.8	-35.6
U.S. dollar	84.0	-9.1
Canadian dollar	80.5	-17.5
Austrian schilling	158.2	+94.0
Belgian franc	115.5	+16.8
Danish kroner	109.6	-9.5
Deutsche mark	158.9	+47.0
Swiss franc	204.5	+83.6
Guilder	126.5	+20.6
French franc	102.7	-3.5
Lira	55.0	-49.9
Yen	121.9	+20.5

Based on trade weighted changes from Washington agreement December, 1971 (Bank of England Index=100).

OTHER MARKETS

Jan. 7	£	$		£ Note Rates
Argentina Peso	5647-5587	1510-1620	Austria	97.45-97.70
Australia Dollar	2.0260-2.0280	0.9965-0.9970	Belgium	64.15-64.55
Brazil Cruzeiro	96.17-95.17	42.10-42.50	Denmark	11.98-12.08
Finland Markka	8.30-8.63	3.6855-3.6885	France	9.02-9.08
Greek Drachma	85.835-86.465	37.70-37.80	Germany	3.84½-3.87
Hong Kong Dollar	11.14-11.16	4.9985-4.9285	Italy	1780-1920
Iran Rial	n/a	n/a	Japan	525-530
Kuwait Dinar (KD)	0.605-0.615	0.2714-0.2716	Netherlands	4.25½-4.29
Luxembourg Frc.	62.85-62.95	27.80-27.82	Norway	11.02-11.09
Malaysia Dollar	4.9070-4.9185	2.1710-2.1720	Portugal	112-116
New Zealand Dlr.	2.2775-2.2795	1.0055-1.0065	Spain	148-166¼
Saudi Arab. Riyal	7.50-7.60	3.3608-3.3618	Switzerland	3.56½-3.56
Singapore Dollar	4.8630-4.8745	2.1500-2.1510	United States	2.245-2.253
Sth. African Rand	1.8685-1.8710	0.8265-0.8270	Yugoslavia	47½-49

Rate given for Argentina is free rate.

EMS EUROPEAN CURRENCY UNIT RATES

	ECU central rates	Currency amounts against ECU January 7	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	39.7897	40.3402	+1.38	+1.38	±1.53
Danish Krone	7.72336	7.74976	+0.34	+0.34	±1.64
German D-Mark	2.48208	2.48216	—	—	±1.125
French Franc	5.84700	5.81757	-0.50	-0.50	±1.3557
Dutch Guilder	2.74362	2.74278	-0.03	-0.03	±1.512
Irish Punt	0.668201	0.672567	+0.65	+0.65	±1.668
Italian Lira	1157.79	1161.48	+0.32	+0.32	±4.08

Changes are for ECU, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

EXCHANGE CROSS RATES

Jan. 7	Pound Sterling	U.S. Dollar	Deutschem'k	Japan'se Yen	French Franc	Swiss Franc	Dutch Guild'r	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	2.262	3.865	523.5	9.065	3.553	4.275	1811.	2.644	62.90
U.S. Dollar	0.442	1.	1.709	231.4	4.008	1.571	1.890	800.7	1.169	27.81
Deutschemark	0.252	0.585	1.	135.4	2.346	0.919	1.106	468.6	0.684	16.27
Japanese Yen 1,000	1.910	4.321	7.385	1000.	17.32	6.786	8.190	3460.	5.051	120.2
French Franc 10	1.103	2.495	4.264	577.6	10.	3.912	4.716	1998.	2.917	69.39
Swiss Franc	0.281	0.637	1.088	147.4	2.552	1.	1.203	509.2	0.744	17.71
Dutch Guilder	0.234	0.529	0.904	122.6	2.120	0.831	1.	423.7	0.618	14.71
Italian Lira 1,000	0.552	1.249	2.134	289.0	5.005	1.961	2.360	1000.	1.460	34.73
Canadian Dollar	0.378	0.856	1.462	198.0	3.429	1.344	1.617	685.0	1.	23.79
Belgian Franc 100	1.590	3.596	6.145	832.3	14.41	5.646	6.797	2880.	4.205	100.

EURO-CURRENCY INTEREST RATES

The following nominal rates were quoted for London dollar certificates of deposit: one month 14.25-14.35 per cent; three months 14.25-14.35 per cent; six months 14.10-14.20 per cent; one year 12.80-12.90 per cent.

Jan. 7	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	West German Mark	French Franc	Italian Lira	Asian $	Japanese Yen
Short term	16-16¼	14⅛-14⅜	12⅛-13⅛	12-12¼	4-4⅛	7-7⅛	11⅞-12⅛	13-16	—	5⅞-8¼
7 days' notice	16½-16¾	14⅛-14⅜	12¾-13⅛	12⅛-12⅜	4-4⅛	7¼-7⅜	12⅛-12⅜	20⅛-22⅞	14¼-14⅜	8⅛-8
Month	16⅞-17⅛	14⅝-14⅞	13¾-14¼	12⅝-12⅞	5⅛-5¼	8-8⅛	13¼-13⅝	20⅞-25¼	14¾-14⅞	7⅞-8
three months	16⅞-17⅛	14⅛-14⅜	13⅞-14¼	12⅛-12⅜	5⅛-5⅞	8¼-8⅜	13⅞-13⅞	20¼-21⅛	14⅛-14⅜	8⅞-8⅞
six months	16⅝-16⅞	14⅞-14⅞	13⅞-13⅞	11⅞-12	5⅞-6	8⅛-8⅛	13⅞-14⅛	19⅛-20⅛	14⅛-14⅛	8¼-8⅛
one year	16⅜-16⅝	16⅛-15⅞	12⅞-12⅞	10⅞-11	5⅞-5⅞	8⅞-8⅞	15⅞-13⅞	19⅛-19⅛	16⅛-16¼	7⅞-8⅛

Long-term Eurodollar two years 12-12¼ per cent; three years 12-12¼ per cent; four years 11⅞-12⅛ per cent; five years 11¾-12 per cent; nominal closing rates. Short-term rates are call for sterling, U.S. dollars and Canadian dollars: two-day call for guilders and Swiss francs. Asian rates are closing rates in Singapore.

INTERNATIONAL MONEY MARKET

European rates steady

European short-term interest rates showed little change yesterday. In Germany rates appear to have stabilised following the sharp decline at the beginning of the new year, although call money was slightly firmer in Frankfurt, rising to 8.10-8.30 per cent from 8.00-8.20 per cent. Day-to-day money was also higher in Paris, rising to 12 per cent from 11⅞ per cent, but period rates were unchanged from Friday. Call money in France has also fallen back since the beginning of the month, when it touched the highest level for over five years. French term rates have also been fairly steady during the last week, while the French franc has remained the strongest member of the European Monetary System, despite the recent appreciation of the D-mark.

In Brussels the Belgian National Bank rejected any idea of selling part of the country's large gold stock by auction. The central bank is a major holder of the metal, with stocks roughly double Japan or the UK, and half France or Germany. Present market levels would value Belgium's gold at over $27bn. During recent months the Belgian franc has been the weakest member of the EMS, but the central bank has preferred to defend the currency in the foreign exchange market and increase interest rates, rather than devalue the franc. Yesterday deposit rates for the Belgian franc were slightly firmer. One-month rose to 14⅞-14⅞ per cent from 14½-14¾ per cent, while three-month was unchanged at 14¼-14¾ per cent. Six-month was quoted at 14½-14¾ per cent, compared with 14½-14¾ per cent; and 12-month at 13¾-13⅞ per cent, compared with 13¾-13⅞ per cent.

PARIS — Apart from call money rates were unchanged with one-month at 12¾-13⅛ per cent; three-month 12⅜-12⅝ per cent; six-month 12⅜-12⅝ per cent; and 12-month 12⅛-12⅜ per cent.

FRANKFURT — Term rates were unchanged with one-month at 8.40-8.60 per cent; three-month 8.60-8.80 per cent; six-month 8.40-8.60 per cent; and 12-month 8.30-8.50 per cent.

AMSTERDAM — Call money firmed to 12⅞-13⅛ per cent from 11⅞-12⅛ per cent, while one-month rose to 12⅞-13⅛ per cent from 12⅞-13 per cent. Three month was 12⅞-13⅛ per cent compared with 12⅞-13⅛ per cent, and six-month 12-12⅛ per cent compared with 11⅞-12⅛ per cent.

HONG KONG — The money market was easy in the morning and stable in the afternoon, with call money at 11¼ per cent and overnight 11 per cent.

GOLD

Sharp rise

Gold rose $40 an ounce in the London bullion market yesterday to equal its all time closing high of $625-635, in active two way trading. The metal opened at $635-645, but these higher levels attracted some profit taking although this was countered by renewed interest at the lower levels. The metal was fixed at $634.00 in the morning and $633.50 in the afternoon.

In Paris the 12½ kilo bar was fixed at FFr 79,750 per kilo ($618.65 per ounce) compared with FFr 79,750 ($620.50) in the morning, and FFr 71,500 ($553.13) on Friday afternoon.

	January 7		January 4	
Gold Bullion (fine ounce)				
Close	$625-635	(£275½-281¼)	$585-595	(£261-266)
Opening	$635-645	(£280¼-287¼)	$605-615	(£270-275)
Morning fixing	$633.50	(£280.062)	$595	(£266.285)
Afternoon fixing	$586	(£262.770)	$586	(£262.770)
Gold Coins				
Krugerrand	$645-655	(£285-290)	$635-650	(£284-294)
Mapleleaf	$655-650	(£280-287)	$620-635	(£280-290)
New Sovereigns	$162-164	(£71½-75½)	$155-160	(£68-72)
King Sovs	$170-180	(£75-80)	$170-180	(£75-81)
Victoria Sovs	$170-180	(£75-80)	$170-180	(£76-81)
Fr20 Napoleon	—	—	—	—
50 pesos Mexico	$785-795		$745-755	
100 Cor. Austria	$620-630		$598-606	
$20 Eagles	$725-745		$720-740	
$10 Eagles	—		—	
$5 Eagles	—		—	

UK MONEY MARKET

Small help

Bank of England Minimum Lending Rate 17 per cent (since November 15, 1979)

Early expectations suggested a surplus of day-to-day money in the London money market yesterday but fears of a firmer trend in interest rates in the near future encouraged the discount houses to sell Treasury bills, and despite the relatively easy conditions in the market the authorities bought a small amount of Treasury bills from the houses.

Bank balances were roughly on target but revenue payments to the Exchequer were slightly in excess of Government disbursements. On the other hand there was a small decline in the note circulation and the market was also helped by small net maturing Treasury bills.

Discount houses paid up to 16 per cent for secured call loans, but closing rates were taken at 13-14 per cent.

In the interbank market overnight loans opened at 16-16½ per cent, and eased to 15½-15¾ per cent. Rates were generally soft in anticipation of a surplus of funds in the banking system, but firmed to 16-16½ per cent again on the suggestion of a flat day. Towards the close rates fell sharply to close at 7-8 per cent.

Rates in the table below are nominal in some cases.

MONEY RATES

NEW YORK	
Prime Rate	15-15¼
Fed. Funds	13¾-14¼
Treasury Bills (13-week)	12.04
Treasury Bills (26-week)	11.82
GERMANY	
Discount Rate	6
Overnight Rate	8.20
One month	8.50
Three months	8.70
Six months	8.80
FRANCE	
Discount Rate	9.5
Overnight Rate	12
One month	12.3125
Three months	12.6875
Six months	12.5625
JAPAN	
Discount Rate	6.25
Call (Unconditional)	6.125
Bills Discount (three-month)	6.4875

LONDON MONEY RATES

Jan 7 1980	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount market deposits	Treasury Bills ♦	Eligible Bank Bills ♦	Fine Trade Bills ♦
Overnight	—	7-16¼	—	—	—	15¾	13-10	—	—	—
2 days notice	—	—	16¾-16⅞	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	16¾-17	16¾-17	—	17¼	17	15½-10	—	—	—
One month	16⅞-16⅞	16⅞-17	16⅞-17	16⅞-17⅛	17¼	17⅛	16⅞	16⅞-16⅞	17⅛-17⅛	17⅛
Two months	16⅞-16⅞	16⅞-17	17⅛-17	—	17¼	—	—	16⅞-16⅞	17⅛-17⅛	17⅛
Three months	16⅞-16⅞	16⅞-17	16⅞-17	16⅞-17	17⅛	17⅛	16⅞	16⅞-16⅞	17⅛	17⅛
Six months	16⅞-16⅞	16⅞-17	16⅞-17	16⅞-16⅞	17⅛	—	—	—	16⅞-16⅞	17⅛
Nine months	16⅞-16⅞	16⅞-16⅞	—	16⅞-16⅞	16⅞	—	—	—	—	—
One year	15⅞-16	15⅞-16	16⅞	15⅞-16⅞	16⅞	—	—	—	—	—
Two years	—	—	15⅞	—	—	—	—	—	—	—

Local authorities and finance houses seven days' notice others seven days fixed. Long-term local authority mortgage rates nominally three years 15¼-15½ per cent; four years 15¼-15½ per cent; five years 15¼-15½ per cent. ♦ Bank bill rates in table are buying rates for prime paper. Buying rates for four-month bank bills 16⅞-16⅞ per cent; four-month trade bills 17½ per cent.

Approximate selling rates for one-month Treasury bills 15¾-15⅞ per cent; two-month 15⅞ per cent; three-month 15⅞-15⅞ per cent. Approximate selling rate for one-month bank bills 17-17⅛ per cent; two-month 17-17⅛ per cent; three-month 16⅞-16⅞ per cent; one-month trade bills 17 per cent; two-month 17⅛ per cent; three-month 17⅛ per cent.

Finance Houses Base Rates (published by the Finance Houses Association) 17 per cent from January 1, 1980. Clearing Bank Deposit Rates for sums at seven days' notice 15 per cent. Clearing Bank Rates for lending 17 per cent. Treasury Bills: Average tender rates of discount 15.8484 per cent.

WORLD VALUE OF THE POUND

The table below gives the latest available rates of exchange for the pound against various currencies on January 7, 1980. In some cases rates are nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

Exchange in the UK and most of the countries listed is officially controlled and the rates shown should not be taken as being applicable to any particular transaction without reference to an authorised dealer.

Abbreviations: (A) approximate rate, no direct quotation available; (F) free rate; (P) based on U.S. dollar parities and going sterling/dollar rates; (T) tourist rate; (Bas) basic rate; (bg) buying rate; (Bk) bankers' rate; (cm) commercial rate; (cn) convertible rate; (fn) financial rate; (exC) exchange certificate rate; (nc) non-commercial rate; (nom) nominal; (o) official rate; (sg) selling rate.

PLACE AND LOCAL UNIT		VALUE OF £ STERLING
Afghanistan	Afghani	94.00
Albania	Lek	10.25
Algeria	Dinar	8.6690
Andorra	French Franc	9.065
	Spanish Peseta	149.40
Angola	Kwanza	68.580
Antigua (S)	E. Caribbean $	6.10
Argentina	Ar. Peso Free Rate	3,657
Australia (S)	Australian $	2.0270
Austria	Schilling	27.825
Azores	Portug. Escudo	112.05
Bahamas (S)	Ba. Dollar	2.2620
Bahrain (S)	Dinar	0.849
Balearic Isles	Spa. Peseta	149.40
Bangladesh (S)	Taka	34.80
Barbados (S)	Barbados $	4.4865
Belgium	B. Franc	(cm) 62.80 / (fn) 65.00
Belize	B $	4.5240
Benin	C.F.A. Franc	453.25
Bermuda (S)	Bda $	2.2620
Bhutan	Indian Rupee	17.80
Bolivia	Bolivian Peso	54.85
Botswana (S)	Pula	1.6700
Brazil	Cruzeiro	90.07
Brit. Virgin Islands (S)	U.S. $	2.2620
Brunei (S)	Brunei $	4.86875
Bulgaria	Lev	1.9656
Burma	Kyat	15.3155
Burundi	Burundi Franc	198.57
Cameroon Republic	C.F.A. Franc	453.25
Canada	Canadian $	2.6440
Canary Islands	Spanish Peseta	149.40
Cape Verde Isle	Cape V. Escudo	82.50
Cayman Islands (S)	Cay. Is. $	1.8850
Cent. Af. Repub.	C.F.A. Franc	453.25
Chad	C.F.A. Franc	453.25
Chile	C. Peso	(o) 87.94
China	Renminbi Yuan	3.3501
Colombia	C. Peso	(F) 99.82
Comoro Islands	C.F.A. Franc	453.25
Congo (Brazzaville)	C.F.A. Franc	453.25
Costa Rica	Colon	19.45
Cuba	Cuban Peso	1.5894
Cyprus (S)	Cyprus £	0.707
Czechoslovakia	Koruna	(com) 11.45 / (nc) 22.75 / (T) 12.94
Denmark	Danish Krone	12.08
Djibouti	Fr.	375.00
Dominica (S)	E. Caribbean $	6.10
Dominican Repub.	Dominican Peso	2.2620
Ecuador	Sucre	(O) 56.09 / (F) 61.44
Egypt	Egyptian £	(O) 1.58
Equatorial Guinea	Peseta	149.40
Ethiopia	Ethiopian Birr	(P) 4.6675
Falkland Islands (S)	Falkland Is. £	1.0
Faro Islands	Danish Krone	12.08
Fiji Islands	Fiji $	1.8650
Finland	Markka	8.515
France	French Franc	9.065
French Cty in Af.	C.F.A. Franc	453.25
French Guiana	Local Franc	9.065
French Pacific Is.	C.F.P. Franc	158.85
Gabon	C.F.A. Franc	453.25
Gambia (S)	Dalasi	4.0
Germany (East)	Ostmark	3.865
Germany (West)	Deutsche Mark	3.865
Ghana (S)	Cedi	6.14
Gibraltar (S)	Gibraltar £	1.0
Greece	Drachma	86.1448
Greenland	Danish Kroner	12.08
Grenada (S)	E. Caribbean $	6.10
Guadaloupe	Local Franc	9.065
Guam	U.S. $	2.2620
Guatemala	Quetzal	2.2620
Guinea Republic	Sily	42.98
Guinea Bissau	Peso	76.35
Guyana (S)	Guyanese $	5.10
Haiti	Gourd	11.30
Honduras Repub.	Lempira	4.5300
Hong Kong (S)	H.K. $	11.1500
Hungary	Forint	(com) 74.77 / (T) (nc) 44.71
Iceland (S)	I. Krona	899.0
India (S)	Ind. Rupee	17.80
Indonesia	Rupiah	1,411.75
Iran	Rial	n/a
Iraq	Iraq Dinar	0.6619
Irish Republic (S)	Irish £	1.0480
Israel	Israel £	80.30
Italy	Lira	1,811.25
Ivory Coast	C.F.A. Franc	453.25
Jamaica (S)	Jamaica Dollar	4.0340
Japan	Yen	523.50
Jordan (S)	Jordan Dinar	0.655
Kampuchea	Riel	2,714.40
Kenya (S)	Kenya Shilling	16.25
Korea (Nth)	Won	2.0970
Korea (Sth)	Won	1,279(O)
Kuwait (S)	Kuwait Dinar	0.610
Laos	Kip Pot Po	904.50
Lebanon	Lebanese £	7.4450
Lesotho	S. African Rand	1.8700
Liberia	Liberian $	2.2620
Libya	Libyan Dinar	0.6695
Liechtenstein	Swiss Franc	3.5585
Luxembourg	Lux Franc	62.90
Macao	Pataca	12.05
Madeira	Portug'se Escudo	112.05
Malagasy Republic	MG Franc	453.25
Malawi (S)	Kwacha	1.7650
Malaysia (S)	Ringgit	4.91275
Maldive Islands (S)	Mal Rupee	8.855
Mali Republic	Mali Franc	906.50
Malta (S)	Maltese £	0.765
Martinique	Local Franc	9.065
Mauritania	Ouguiya	90.90
Mauritius (S)	M. Rupee	17.10
Mexico	Mexican Peso	51.44
Miquelon	C.F.A. Franc	453.25
Monaco	French Franc	9.065
Mongolia	Tugrik	(o) 6.8650 (g)
Montserrat	E. Caribbean $	6.10
Morocco	Dirham	8.27
Mozambique	Moz. Escudo	69.30
Nauru	Australian Dollar	2.0270
Nepal	Nepalese Rupee	27.15
Netherlands	Guilder	4.2750
Netherland Antilles	Antillian Guilder	4.0490
New Hebrides	Franc. / Aust. Dollar	146.20 / 2.0270
New Zealand (S)	N.Z. Dollar	2.2765
Nicaragua	Cordoba	22.66
Niger Republic	C.F.A. Franc	453.25
Nigeria (S)	Naira	1.380182 (sg)
Norway	Norway Krone	11.10
Oman Sul'ate of (S)	Rial Omani	0.777
Pakistan	Pakistan Rupee	22.05
Panama	Balboa	2.2620
Papua N. Guinea (S)	Kina	1.5330
Paraguay	Guarani	281.42
Peoples D. Repub. of Yemen (S)	S. Yemen Dinar	(A) 0.7725
Peru	Sol	(exC) 564.03
Philippines	Philippine Peso	16.76
Pitcairn Islands (S)	£ Sterling / New Zealand $	1.0 / 2.2765
Poland	Zloty	(cm) 66.00 / (T) 68.00
Portugal	Portugu'se Escudo	112.05
Port Timor	Timor Escudo	112.05
Puerto Rico	U.S. $	2.2620
Qatar (S)	Qatar Ryal	8.30
Reunion Ile de la	French Franc	9.065
Rhodesia	Rhodesian $	1.49
Romania	Leu	(Cm) 10.03 / (nc) 26.95
Rwanda	Rwanda Franc	203.25
St. Christopher (S)	E. Caribbean $	6.10
St. Helena	St. Helena £	1.0
St. Lucia	E. Caribbean $	6.10
St. Pierre	C.F.A. Franc	453.25
St. Vincent (S)	E. Caribbean $	6.10
Salvador El	Colon	5.64
Samoa American	U.S. $	2.2620
San Marino	Italian Lira	1,811.25
Sao Tome & Principe	Dobra	78.68
Saudi Arabia	Ryal	7.55
Senegal	C.F.A. Franc	453.25
Seychelles	S. Rupee	15.50
Sierra Leone (S)	Leone	2.2895
Singapore (S)	Singapore $	4.86875
Solomon Islands (S)	Solomon Is. $	2.0270
Somali Republic	Somali Shilling	(A) 10.65
South Africa (S)	Rand	1.8700
South West African Territories (S)	S. A. Rand	1.8700
Spain	Peseta	149.40
Spanish ports in North Africa	Peseta	149.40
Sri Lanka (S)	S. L. Rupee	34.50
Sudan Republic	Sudan £	(A) 1.1310
Surinam	S. Guilder	4.0490
Swaziland (S)	Lilangeni	1.8700
Sweden	S. Krona	9.34
Switzerland	Swiss Franc	3.5585
Syria	Syria £	(A) 8.8810
Taiwan	New Taiwan $	(P) 81.46
Tanzania (S)	Tan. Shilling	18.20
Thailand	Baht	45.70
Togo Republic	C.F.A. Franc	453.25
Tonga Islands (S)	Pa'anga	2.0270
Trinidad (S)	Trinidad & Tob' $	5.4350
Tunisia	Tunisian Dinar	0.865
Turkey	Turkish Lira	106.33
Turks & Caicos	U.S. $	2.2620
Tuvalu	Australian $	2.0270
Uganda (S)	Uganda Shilling	16.20
United States	U.S. Dollar	2.2620
Uruguay	Uruguay Peso	(cm) 19.05 / (fn) 19.01
Utd. Arab Emirates	U.A.E. Dirham	8.40
U.S.S.R.	Rouble	1.4564
Upper Volta	C.F.A. Franc	453.25
Vatican	Italian Lira	1,811.25
Venezuela	Bolivar	9.6800
Vietnam	Dong	(O) 4.96 / (T) 4.60
Virgin Islands U.S.	U.S. Dollar	2.2620
Western Samoa (S)	Samoan Tala	2.0150
Yemen	Ryal	10.17
Yugoslavia	New Y Dinar	43.1229
Zaire Republic	Zaire	4.51
Zambia	Kwacha	1.70

*That part of the French community in Africa formerly French West Africa or French Equatorial Africa. † Rupees per pound. ‡ General rates of oil and iron exports $5.00. ** Rate is the transfer market (controlled). †† Rate is now based on 2 Barbados $ to the dollar. ‡‡ Now one official rate. (U) Unified rate. Applicable on all transactions except countries having a bilateral agreement with Egypt and so are not members of IMF. (§) Based on gross rates against Russian rouble. ● Incentive rate.

EUROPEAN OPTIONS EXCHANGE

Series	Jan. Vol.	Jan. Last	April Vol.	April Last	July Vol.	July Last	Stock
ABN C F.320	—	—	12	3.70	—	—	F.307
ABN C F.330	—	—	1	2.50	—	—	
AKZ C F.22.50	—	—	2	3.50	5	6.20	F.25.40
AKZ C F.25	—	—	45	1.30	57	1.90	
AKZ C F.27.50	—	—	5	0.70	6	1.10	
AKZ C F.30	—	—	15	0.50	—	—	
AKZ P F.25	—	—	—	—	—	—	
AKZ P F.27.50	19	5.20	—	—	—	—	F.95.30
ARB C F.100	1	1.50	—	—	—	—	
ARB C F.240	—	—	1	0.60	—	—	F.231
GSF C F.440	—	—	5	68	—	—	F.460
EK C $50	—	—	—	—	—	—	$47
EX C F.22.50	—	—	—	—	24	2.60	F.21.70
HO C F.70	—	—	—	—	5	7	F.70.80
KLM C F.70	8	3.20	5	5	10	3.60	
KLM C F.80	10	0.90	9	0.70	4	3.20	
KLM C F.90	—	—	—	—	—	—	
KLM C F.100	10	10	—	—	9	8.50	
KLM P F.70	10	3.50	—	—	—	—	
KLM P F.80	10	9.50	16	10.40	—	—	
KLM P F.90	—	—	—	—	—	—	
NN C F.110	5	8.50	—	—	—	—	F.119.40
NN C F.115	—	—	2	4.40	4	9.70	
NN C F.120	78	0.50	28	—	11	5.60	
NN C F.130	—	—	2	—	—	—	
PET C Fr.6000	3	1100	—	—	—	—	Fr.6790
PET C Fr.6500	5	300	—	—	—	—	
PET C Fr.7000	—	—	—	—	—	—	
PET P Fr.6000	5	20	—	—	1	640	
PHI C F.20	7	—	1	—	7	2.10	F.20.70
PHI C F.22.50	—	—	20	0.50	255	0.90	
PHI C F.25	—	—	60	0.20	340	0.40	
PHI C F.27.50	—	—	—	—	—	—	
PHI P F.20	—	—	—	—	2	4.60	
RD C F.140	45	0.30	16	12.50	10	12.30	F.145.50
RD C F.145	58	2.40	—	—	—	—	
RD C F.150	255	0.80	1	3.00	—	—	
RD C F.160	4	0.10	8	3.40	3	3.50	
RD P F.145	152	1.10	115	3.40	—	—	
RD P F.150	10	4.50	185	8.60	—	—	
RD P F.160	10	14.50	11	14	0	10	
UNI C F.115	—	—	—	—	—	—	F.119.50
UNI C F.120	—	—	5	0.70	—	—	
UNI C F.130	—	—	20	1.70	—	—	
	Feb.		May		Aug.		
BA C $40	16	15	1	8¾	—	—	$54⅛
BA C $45	2	9½	—	—	4	12	
BA C $50	47	6	—	—	—	—	
OXY C $20	6	4¼	10	7½	—	—	$25⅛
SLB C $100	—	—	2	—	20	9¼	$94¼

TOTAL VOLUME IN CONTRACTS 2409

C=Call P=Put

BASE LENDING RATES

A.B.N. Bank	17 %	■ Guinness Mahon	17 %
Allied Irish Bank	17 %	■ Hambros Bank	17 %
Amro Bank	17 %	■ Hill Samuel	§17 %
American Express Bk.	17 %	C. Hoare & Co.	†17 %
Henry Ansbacher	17 %	Hongkong & Shanghai	17 %
A P Bank Ltd.	17 %	Industrial Bk of Scot.	17½%
■ Arbuthnot Latham	17 %	Keyser Ullmann	17 %
Associates Cap. Corp.	17 %	Knowsley & Co. Ltd.	18½%
Banco de Bilbao	17 %	Lloyds Bank	17 %
Bank of Credit & Cmce.	17 %	London Mercantile	17 %
Bank of Cyprus	17 %	Edward Manson & Co.	18 %
Bank of N.S.W.	17 %	Midland Bank	17 %
Banque Belge Ltd.	17 %	■ Samuel Montagu	17 %
Banque du Rhone et de la Tamise S.A.	17½ %	Morgan Grenfell	17 %
Barclays Bank	17 %	National Westminster	17 %
Bremar Holdings Ltd.	18 %	Norwich General Trust	17 %
Brit. Bank of Mid. East	17 %	P. S. Refson & Co.	17 %
■ Brown Shipley	17 %	Rossminster	17 %
Canada Perm't Trust	17 %	Ryl. Bk. Canada (Ldn.)	17 %
Cayzer Ltd.	17 %	Schlesinger Limited	17 %
Cedar Holdings	17 %	E. S. Schwab	17 %
Chartered Trust Ltd.	18 %	Security Trust Co. Ltd.	18 %
■ Charterhouse Japhet	17 %	Shenley Trust	19 %
Choulartons	17 %	Standard Chartered	17 %
C. E. Coates	17 %	Trade Dev. Bank	17 %
Consolidated Credits	17 %	Trustee Savings Bank	17 %
Co-operative Bank	*17 %	Twentieth Century Bk.	17 %
Corinthian Secs.	17 %	United Bank of Kuwait	17 %
The Cyprus Popular Bk.	17 %	Whiteaway Laidlaw	17½%
Duncan Lawrie	17 %	Williams & Glyn's	17 %
Eagil Trust	17 %	Yorkshire Bank	17 %
E. T. Trust Limited	17 %		
First Nat. Fin. Corp.	18½%		
First Nat. Secs. Ltd.	18 %		
Robert Fraser	18 %		
■ Antony Gibbs	17 %		
Greyhound Guaranty	17 %		
Grindlays Bank	‡17 %		

■ Members of the Accepting Houses Committee.
* 7-day deposits 15%. 1-month deposits 15¼%.
† 7-day deposits on sums of £10,000 and under 15%, up to £25,000 15¼% and over £25,000 15½%.
‡ Call deposits over £1,000 15%.
§ Demand deposits 15%.

Beauty can be a mixed blessing · Bermuda

BY MICHAEL DIXON

CONFRONTED BY last week's pictures of the beautiful Sherry Lansing, new president of Twentieth Century Fox Productions, many people must have shared a certain thought. It is that, to an important degree, Ms Lansing's face has proved her fortune in her managerial, as well as in her previous modelling career.

It would not surprise me if the pictures have inspired some ambitious Jobs Column readers to think nf undergoing a bit of cosmetic surgery before applying for their next promntion. But before they do so, they had hetter take note of the evidence that beauty is not always a hridge to the boardroom. Indeed, the results of a recent study by two women researchers at Yale University, might imply that Sherry Lansing's appearance more bampered than aided her promotion to top management.

No doubt most personnel profesaionals helieve that their judgmeots are oot materially affected by the beanty or ntherwise of job-caodidates. This belief mey perhaps seem supported by e swift, subjective review of the features of most people bolding bigh positions in business and elsewbere. But the fect remains that several research studies beve iodicated that physical attractiveness does bave a positive association with career success among men as well as women.

The recent experiment hy Yale's Professor Madeline Heilman and Lois Saruwatari is, however, more apposite to the case of Ms Lansing than were the studies of the past. These tended, when considering women, to confine themselves to careers of non-managerial kinds. An example is the large-scale study of female secretarial and clerical staff in the United Stetes some time ago, which found that size of bust was the most prominent, if not the only, factor associated with career progress.

The Yale experiment required the 23 men and 22 women whom it used as "recruitment managers" to assess females and males alike in terms of their suitability for managerial work, as well as for noo-managerial posts.

The 45 assessors, who were studying administrative science end in many cases intending to enter personnel management, were given descriptions of two jobs. Both were in insurance, and nf the "back room" type involving little or no coutact with customers whom the assessors might think susceptible to physical eppeal.

Ooe of the jobs, with e salary range of roughly £3,000 to £4,000, was of the clerical kind entailing the maintenance of records and suchlike. The other waa e managerial post requiring the holder to recognise problems and to act to overcome them, and had a salary range of about £7,000 to £8,000.

The assessors were also given descriptions of recent granates who were said to be candidates for one or other of the jobs on offer. The candidates' application forms and so on showed them to have equally suitable qualifications. But half of them were men, and half were women. And photographs attached to the applications showed balf of the men and half of the women to be physically attractive, whereas the others were nnthing to write home about, at all.

The 45 assessors — who had been told merely that they were taking part in a study nf decision-making in personnel management — considered each candidate in detail and recommended which person should be appointed to the job in question, and at wbat starting salary.

When the recommendations were reviewed, it was found that the assessors had been entirely free from sex discrimlnation aa such. For each job, men and women bad been recommended with equal frequency. But the results showed a distinct bias according to the caodidates' physical appearance.

In the non-managerial post, both the men and the women who were attractive were recommeoded far more often than were their et best plain competitors. So were the handsome male candidates for the managerial job.

But in appointing women to the managerial post, the assessors showed a definite preference in the opposite direction, Indeed, the unattractive women were not only recommended more frequently than were their more appealing sisters, hut also awarded higher starting salaries.

Commenting on this result in the American journal *Organizational Behavior and Human Performance*, Professors Heilman and Saruwatari refer to previnns research findings that attractive women are generally regarded as being mnre feminine than their less comely counterparts. Similarly, handsome men are perceived as being more masculine.

Where women are concerned, the Yale researchers argue, the tendency will be for those who appear attractively feminine to have an advantage wben the job for which they are applying is mainly essociated with feminine characteristics.

In the case of jobs which are generally considered suitable for both women and men, the pretty or the handsome will have an advaotage.

But in the managerial johs which bave traditionally bed e masculine publie imege, althougb handsoma men will still have en edge, feminine good looks will tend to be a handicap.

"It thus appears that, in contrast to women for whom attractiveness can act to limit rather than enhance opportunities for obtaining positions of responsibility and authority, men have little to lose and much to gain in organisational life by being attractive," the Yale researchers say.

"This finding sadly implies that women should strive to appear as unattractive and as masculine as possible if they are to succeed in advancing their careers by moving into powerful organisational positions."

Insurance

NOW to Bermuda where an extravert accountant with copious, first-hand knowledge of the insurance business is wanted by a subsidiary of the big Uulted Statea insurance-broking group, Johnson and Higgins. The recruit is being sought by Barry Latchford, nf Lloyd Chapman Associates, to lead a team of six to eight account executives, each furnishing financial and appropriete managerial advice and services to the subsidiary's clients. Much of the work is concerned with "captive" companies bendling the insurance affairs of their parent group.

As senior account executive, the newcomer will be respoosible to the vice-president for finance and administration fnr managing the work of the various members nf the team. Another important duty will be direct dealings with senior managers in the client concerns on questions nf policy for insurance, inclnding the investment of premiums. Some overseas travel, particularly tn the U.S., will be required.

The preference is for a qualified accountant, probably aged in the mid-30s, who has risen to a financial management positinn and also worked long enough—at least three years, is Mr. Latchford's specification—in nr around insurance to know about the world-wide workings of the business and about the levels of risk entailed. Appreciation of how tax regulations affect insurance funds, particularly in the U.S., would be definitely helpful.

"Starting salary is not going to be a problem," Mr. Latchfnrd purrs. My estimate is that the figure will be US$ 30,000 or a bit more, and tax-free. I'm tnld that life in Bermuda is generally about one-third again as expensive as in the UK, which would make—say—$25,000 there the equivalent of about £9,000 net here.

Inquiries to Barry Latchford at 123 New Bond Street, London W1Y 0HR. He has two telephone numbers—01-499 7761 and 408 1670. His telex number is 298942.

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WORLD STOCK MARKETS

Dow 6 higher at mid-session

STOCKS ON Wall Street tended to recover further ground in active early dealings yesterday, with defence issues again featuring strongly along with shares that may benefit from an increase in gasohol sales.

The Dow Jones Industrial Average was 6.31 higher at 835.15 at 1 pm and the NYSE All Common Index 38 cents firmer at $61.55, while rises outnumbered falls by an eight-to-five ratio. Trading volume increased to 29.26m shares from last Friday's 1 pm figure of 26.60m.

Analysts said investors were buying in anticipation of a large increase in U.S. defence spending, while President Carter's halt to grain shipments to the Soviets and decision to use some of the grain for gasohol helped many issues.

Traders were also encouraged by the market's performance on Friday when it rebounded sharply from losses earlier in the week.

Among defence issues, Boeing advanced 3⅞ to $58⅞. Rohr which expanded its bank credit line to $100m from $75m, 1⅛ to $18⅞. United Technologies 3½ to $49½, Northrop 4⅛ to $49½ and Teledyne $5 to $138⅞.

Among potential beneficiaries of increased gasohol production, active Standard Brands rose $2 to $28⅛. Archer-Daniels-Midland 2½ to $31⅛, A. E. Stanley 2⅞ to $32⅞ and CPC 3⅞ to $63⅛.

However, fertiliser and farm equipment shares declined on the grain news. Active Williams Companies lost $1 to $30, Beker Industries 1⅝ to $13¾, International Minerals and Chemical 1⅞ to $54⅛, Deere 1½ to $36½ and International Harvester 1⅝ to $36.

Gold, Silver and Copper issues rose on higher metal prices. Kennecott gained 2⅞ to $35, Asarco 2⅞ to $42⅞, active Benguet, which opened a new copper concentrator, ⅞ to $7⅞, ASA 1⅝ to $46⅛, Sunshine Mining 1⅝ to $36 and Hecla 2¼ to $44⅞.

Four Phase Systems, which last week forecast a profits decline, fell 9⅛ to $34⅞.

Closing prices for North America were not available for this edition.

THE AMERICAN SE Market Value Index moved ahead 3.21 to 246.76 at 1 pm. Volume 4.75m shares (3.46m).

Canada

Markets showed a firm bias in an active trade yesterday morning. The Toronto Composite Index rose 8.0 to 1603.2 at noon. The Golds Index advanced 38.8 to 2,857.4, Metals and Minerals 35.5 to 1,532.8, and Oil and Gas 34.4 to 3,704.8.

In Montreal, the Banks Index fell 5.36 to 298.12.

Tokyo

After initial firmness, the market generally receded as investors became concerned over the possibility of trade conflicts with the U.S.

Trading was very active, with volume reaching 650m shares, compared with last Friday's 270m and Saturday's half-day session total of 330m. Declining issues on the First market section finally outscored gains by 304 to 256, while the Nikkei-Dow Jones Average closed 30.38 down at 6,552.65. The Tokyo SE index lost 1.66 to 458.24.

A strong wave of early buying had centred on Non-ferrous Metal issues and such defence-industry related stocks as Fuji Heavy and Ishihara Sangyo Kaisha, reflecting the recent political tension between the U.S. and Soviet Union. Mitsubishi Metal rose Y19 to Y196 and Sowa Mining Y21 to Y451.

However, there was later speculation in the market that the U.S. suspension of grain exports to the Soviet Union would enlarge Washington's trade deficit further and lead to a U.S. trade conflict with Japan in the future.

Shipping Lines and Trading Houses led the fall, with Mitsubishi losing Y36 to Y708, C. Itoh Y36 to Y507, Sanko Steamship Y16 to Y333 and Yamashita Shinnihon Steamship Y12 to Y206.

Export-orientated issues closed weaker partly because of the appreciation of the yen, with Sony dipping Y40 to Y1,740, Matsushita Electric Y12 to Y698, Nissan Motor Y7 to Y727 and Canon Y19 to Y641.

Energy-related stocks firmed initially, extending last week's gains, but finished easier on balance on late profit-taking. Nippon Oil lost Y20 to Y1,710, Mitsui Mining Y18 to Y532, Teikoku Oil Y34 to Y986 and Arabian Oil Y10 to Y3,310.

Hong Kong

A wave of local selling took the market sharply lower throughout the day, with the Hang Seng index retreating 32.66 more to 816.18. Turnover was again fairly heavy, totalling HK$288.92m on the four stock exchanges against last Friday's HK$280.41m.

Brokers attributed the fall to continuing fears that the Government may impose tighter regulations in the Property sector and the international strife. Some institutional investors also now regard the market as overbought and are taking profits.

Among the leaders, Jardines receded 70 cents to HK$15.10, Swire Pacific "A" 60 cents to HK$8.65, Hongkong Bank 70 cent to HK$17.90 and Hongkong Electric 30 cents to HK$5.85.

In the Property sector, Hong Kong Land shed 50 cents to HK$13.30, Cheung Kong fell 80 cents to HK$18.70 and Sun Hung Kai Properties 40 cents to HK$16.50.

Among Utilities, Hong Kong Gas declined 20 cents to HK$27.80 and China Light HK$1.10 to HK$13.70.

Paris

Bourse prices were firmer-inclined after quiet dealings. Brokers said there had been a certain amount of bargain hunting following the heavy losses of last Wednesday and Thursday. In the French section, gains led declines by 99 to 69.

Metals, Electricals, Mechanicals and Oils were favoured, but Chemicals, Stores and Publishing Houses mostly drifted lower.

Elf-Aquitaine gained FFr 5 to FFr 1,200 on forecasting higher, 1979 net profits.

Australia

Following last Friday's downturn on profit-taking, stocks started on an uncertain note yesterday but became predominantly firmer during the afternoon. The Sydney All Ordinaries index ended 7.38 up at 788.77.

Golds forged ahead amid talk of another upsurge in Bullion prices in Hong Kong. Central Norseman Gold advanced 96 cents to A$8.98, GMK 10 cents to A$4.00, Poseidon 18 cents to A$2.60, Emperor 8 cents to A$1.65 and Peko-Wallsend 20 cents to A$8.40.

Tin stocks also performed well, with Renison rising 20 cents to A$16.70 and Aberfoyle 25 cents to A$5.10.

Among other Base Metal producers to strengthen, MIM gained 20 cents to A$4.75, Bougainville Copper 25 cents to A$3.00 and Western Mining 10 cents to A$3.70.

Diamond explorer Ashton firmed 3 cents to A$2.95, while the major exploration partner CRA put on 10 cents to A$5.90. The consortium's quarterly report is due later this week. Brokers believe the report will announce the setting-up of commercial diamond operations on the Ellendale deposit in the Kimberly region.

In the Oils sector, Woodside improved 10 cents to A$2.37 and Lennard 35 cents to A$1.65.

Market leader BHP, after declining to A$11.80 at the outset, rose to A$12.05 for a net gain of 5 cents.

Johannesburg

Gold shares closed higher, but some of the initial sharper gains were trimmed by afternoon profit-taking as the gold price eased.

Kloof rose 400 cents to R29.00, after touching R29.50, Venters 100 cents to R11.90, Vaal Reefs 250 cents to R70.00, and Ergo 70 cents to R8.80. Mining Financials shadowed golds, with Anglos gaining 140 cents to R16.60 and Genmin 75 cents to R18.75. Amgold advanced 400 cents to R100.00 and De Beers 160 cents to R11.70.

Platinums firmed in active trading, while Industrials closed mixed with a firmer bias.

Indices

NEW YORK—DOW JONES

	Jan. 4	Jan. 3	Jan. 2	Dec. 31	Dec. 28	Dec. 27	1979-80 High	1979-80 Low	Since Compiltn High	Since Compiltn Low
♦Industr'ls	828.84	820.31	824.57	838.74	838.91	840.10	897.61 (5/10)	796.67 (7/11)	1051.70 (11/73)	41.22 (2/7/32)
H'me B'nds	75.78	75.76	75.47	75.35	75.65	75.83	86.10 (18/8)	75.35 (31/12)	—	—
Transport.	251.51	247.22	249.71	252.39	253.26	252.97	271.77 (18/8)	205.78 (27/2)	279.88 (7/2/69)	12.23 (8/7/32)
Utilities	106.84	106.16	105.83	106.80	107.04	107.21	109.74 (17/12)	98.24 (24/10)	165.32 (20/4/65)	10.52 (28/4/42)
Trading Vol. 000's†	39,410	50,780	41,920	31,880	34,510	31,540	—	—	—	—

♦Day's high 833.53 low 212.03

Ind. div. yield %	Dec. 25	Dec. 81	Dec. 14	Year ago (approx)
	6.03	6.03	6.00	6.00

STANDARD AND POORS

	Jan. 4	Jan. 3	Jan. 2	Dec. 31	Dec. 28	Dec. 27	1979-80 High	1979-80 Low	Since Cmpil't'n High	Since Cmpil't'n Low
‡Indust'ls	119.32	117.81	118.41	121.02	120.88	121.04	124.49 (10/10)	107.08 (27/2)	134.64 (11/1/73)	3.52 (30/6/32)
§Composite	106.52	105.22	105.76	107.84	107.84	107.96	111.27 (5/10)	96.15 (27/2)	125.85 (11/1/73)	4.40 (1/6/32)

	Jan. 9	Dec. 26	Dec. 19	Year ago (approx)
Ind. div. yield %	5.36	5.27	2.24	5.21
Ind. P/E Ratio	7.54	7.57	7.70	8.56
Long Gov. Bond Yield	10.15	10.17	10.09	8.95

N.Y.S.E. ALL COMMON

Jan. 4	Jan. 3	Jan. 2	Dec. 31	1979-80 High	1979-80 Low
61.17	60.34	60.59	61.95	62.88 (2/1/8)	53.88 (27/3)

Rises and Falls	Jan. 4	Jan. 3	Jan. 2
Issues Traded	1,869	1,891	1,909
Rises	1,254	440	436
Falls	304	1,144	1,121
Unchanged	311	357	352
New Highs	—	13	52
New Lows	—	57	35

MONTREAL	Jan. 4	Jan. 2	Jan. 3	Dec. 31	1979-80 High	1979-80 Low
Industrial	325.81	324.29	326.39	323.92	332.12 (5/10)	219.10 (2/1)
Combined	307.22	305.90	308.32	311.44	314.36 (5/10)	225.66 (2/1)
TORONTO Composite	1796.2	1789.4	1806.1	1613.2	1813.2 (31/12)	1516.8 (2/1)

	Jan. 7	Jan. 4	Jan. 3	Jan. 2	1979-80 High	1979-80 Low
AUSTRALIA Sydney All Ord. (1936/58)	788.77	781.28	771.21	780.00	771.21 (3/1/80)	545.72 (2/1/79)
Metals & Minls (1958/58)	4806.84	4680.14	4847.88	4712.65	4847.38 (3/1/80)	2587.34 (2/1/79)
AUSTRIA Credit Aktien (2/1/62)	65.40	65.85	65.20	66.55	66.40 (7/1/80)	61.53 (1/8)
BELGIUM Belgian SE (31/12/65)	105.10	101.74	101.48	101.85	109.47 (5/10)	96.60 (5/1/79)
DENMARK Copenhagen SE (1/1/73)	84.15	85.15	85.87	86.74	97.45 (25/7)	84.75 (7/1/80)
FRANCE CAC General (29/12/61)	(u)	98.80	97.1	(u)	116.1 (5/10)	82.4 (16/2)
Ind Tendance (28/12/79)	87.7	87.40	95.0	96.1	108.0 (28/12/79)	85.8 (3/1/80)
GERMANY FAZ-Aktien (31/12/58)	222.88	222.20	220.75	223.88	265.69 (16/1/79)	220.78 (3/1/80)
Commerzbank(Dec.1953)	702.3	701.30	695.5	705.0	833.89 (15/1/79)	695.5(3/1/80)
HOLLAND ANP-CBS General (1970)	85.5	85.20	82.7	84.8	94.2 (24/1/79)	82.7 (3/1/80)
ANP-CBS Indust. (1970)	67.1	66.50	66.1	65.1	85.9 (24/1/79)	65.7 (15/12)
HONG KONG Hang Seng Bank(31/7/64)	816.18	848.84	862.06	869.15	869.15 (2/1/80)	495.56 (2/1/79)
ITALY Banca Comm. Ital (1972)	86.65	85.85	85.29	86.11	93.85 (4/10)	68.38 (2/1/79)
JAPAN Dow Average (16/5/49)	6552.65	6580.15	(c)	(c)	6590.89 (28/9)	5825.87 (16/4)
Tokyo New SE (4/1/68)	458.24	458.80	(c)	(c)	465.24 (29/9)	455.15 (13/7)
NORWAY Oslo SE (1/1/72)	135.08	135.20	135.78	135.01	142.32 (18/12)	74.46 (16/1)
SINGAPORE Straits Times (1966)	435.08	432.80	428.75	435.22	435.41 (31/12)	345.34 (23/2)
SOUTH AFRICA Gold (1958)	(u)	505.0	555.3	540.3	540.3 (2/1/80)	222.48 (17/4)
Industrial (1958)	(u)	465.5	466.2	458.8	466.5 (4/1/80)	270.30 (2/1/79)
SPAIN Madrid SE (28/12/79)	(c)	100.05	100.52	100.75	100.75 (2/1/80)	100.00 (28/12/79)
SWEDEN Jacobson & P. (1/1/58)	349.70	348.22	345.27	352.58	401.34 (6/2)	331.37 (24/9)
SWITZERLAND Swiss Bank Cp. (31/12/58)	297.8	298.2	302.0	303.9	323.16 (2/5)	294.99 (6/1/79)

Base values of all indices are 100 except NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; the last named based on 1975. † Excluding bonds. ‡ 400 Industrials. § 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. u Unavailable.

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day
Boeing	800,400	54⅞	+4⅞
Benguet	654,100	7	−⅞
IBM	472,600	63⅞	+⅛
Asarco	456,300	40	+⅞
U.S. Steel	382,700	18	—
American Mtrs.	381,900	2	+1
Dow Chemical	378,100	31½	+½
Vario Eng.	358,700	13⅞	+2⅞
Cent. Soya	347,800	15⅞	+1⅞
Exxon	296,800	52	+⅞

NEW YORK

Stock	Jan. 4	Jan. 3
Clark Equipment	38⅛	38⅛
Cleve Cliffs Iron	32½	32⅞
Clorox	10	9¾
Cluett Peaby	8⅞	2
Coca Cola	52	34⅞
Coca Btl. NY	6	5⅞
Colgate Palm	14	14⅛
Collins Aikman	8	6
Colt Inds	43⅞	43¼
Getty Oil	73¼	71½
Giddings Lewis	25	05⅞
Gillette	08¼	25¼
Global Marine	38¾	37⅞
Goodrich (BF)	20½	12⅞
Goodyear Tire	13	13
Gould	03½	28¾
Grace	32⅛	30¼
Grainger (WW)	52	36⅞
St. Joe Minls	37	37
St. Louis-San F.	53¾	53½
St. Paul Cos.	40½	40¼
St. Regis Paper	29⅞	29½
Santa Fe Inds	50¼	50¼
Santa Fe Intl	34¾	33⅞
Saul Invest	7½	7⅞
Saxon Inds	8¼	8
Schering Plo	29⅞	20⅞
Wisc Elec Power	22⅞	23
Woolworth	24⅞	23⅞
Wrigley	76	73¼
Wyly	8¾	3½
Xerox	59½	59¾
Yellow Frt Sys	15¼	14¾
Zapata	27¾	26⅞
Zenith Radio	2⅞	9½
U.S. Trs 4% 1980	99⅞	99⅞

CANADA

Stock	Jan. 4	Jan. 3
Abitibi	18¾	18⅝
Agnico Eagle	12½	13
Alcan Alumn	55⅞	54¼
Algoma Steel	30½	30
Asbestos	33¼	33⅛
Bk Montreal	24⅞	24⅞

BELGIUM (continued)

Jan. 7	Price Frs.	+ or −
Petrofina	5,720	+70
Royale Belge	5,300	−70
Soc Gen Banq	2,885	−10
Soc Gen Belge	1,650	+10
Sofina	5,160	
Solvay	2,380	−5
Traction Elect	2,535	+35

HOLLAND

Jan. 7	Price Fls.	+ or −
ACF Holding	72	+1
Ahold	80.3	−0.2
AKZO	23.4	+0.3
ABN	307	+1
AMEV	100.5	+1.2
AMRO	65.3	−0.2

AUSTRALIA

Jan. 7	Price Aust. $	+ or −
ANZ Group	4.15	
Acrow Aust	1.05	
Allstate Expl	0.78	+0.08
Ampol Pet	1.18	+0.02
Ast. Pulp Pap	2.20	+0.02
Audimco	0.06	
Aust Cons Ind	2.50	−0.05
Aust Guarant	1.40	

JAPAN (continued)

Jan. 7	Price Yen	+ or −
Makita	1,170	−20
Marubeni	378	
Marudai	648	−18
Marui	763	−23
Matsushita	698	−18
M'ta Elec Works	372	−3
M'bishi Bank	378	+3

COMMODITIES and AGRICULTURE

Walker suggests national finance to ease EEC farm problems

BY RICHARD MOONEY

A GREATER degree of national financing could help to ease the financial problems plaguing the EEC's Common Agricultural Policy (CAP) Mr. Peter Walker, the UK Agriculture Minister, told farmers in Oxford last night.

He suggested that the full cost of agricultural support should not fall upon the CAP but that a proportion of the money should be provided directly by the countries in which the expenditure occurred. He also said social policy should be separated from the CAP with member governments providing direct aid to their small farmers if they so wished.

The basic problem was that the CAP had to cope with far more production than was ever intended, Mr. Walker told the inaugural dinner of the Oxford Farming Conference. "The obvious approach to surplus production is to restrain it by direct economic forces, that is by holding down the level of support."

He said the EEC Commission's recent proposals sought to solve the CAP's cash problem by creating new revenues rather than by dealing with their root cause. Its plan to increase levies on milk production was an example of this approach.

"Why is it always the consumer who has to find the money," he asked. "The support price could be fixed lower by the amount of the levy. This would make no difference to the producer; consumers would be better off; and the cost of surplus disposal would be less, because a lower rate of export subsidy would be needed."

Mr. Walker said a tough policy on the level of support for surplus products was essential. He admitted that some small producers might need protection under such a policy, but argued that the whole of the resulting cost should fall on the national Exchequer, not on the Community budget.

With the cost of running the CAP having trebled since 1973 the need for reform was "obvious and urgent," Mr. Walker declared. He said the current level of expenditure represented a "gross misuse of resources."

Also speaking at the dinner Mr. Roy Jenkins, president of the Commission, agreed that the CAP was in urgent need of *adaptation. "That is why the* Commission has recently proposed a series of measures to deal with the surpluses, particularly milk and sugar," he said.

He denied that the proposals were unfair to British producers.

Mr. Jenkins also commented on the Franco/British lamb dispute. "I believe that France will comply with the European *Court's judgment on sheepmeat* (ruling that the ban on imports from Britain is illegal)," he said. "She has benefited from the *opening up of Europe's agricultural markets, and has every reason to preserve it."*

He *pledged that the Commission* would take further legal action if necessary, to ensure that the judgment was honoured.

John Cherrington writes: Mr. Walker's suggestion that the cost of the CAP should be shared by national exchequers would make no difference to the overall burden on the taxpayer.

But *his suggestion* that governments should foot the bill for the support of their poorer farmers is more interesting. It is believed that the UK Government has been thinking that the only way in which to control community expenditure on the CAP would be to make member states and their farmers much more responsible for their own farm production.

At the moment such a measure would be howled down by all in Brussels as being against the rules. But in fact it is the only practical way of enforcing production discipline and saving money.

By mentioning such possibilities, Mr. Walker is being fairly daring in the present climate but he does seem to be testing the opinions of his colleagues.

European grain prices hit by U.S. ban

BY SARA DAVIES

BRITISH grain prices declined in early trading yesterday following the U.S. decision to ban the export of about 17m tonnes of grain to the Soviet Union. Elsewhere in Europe oils and oilseed markets eased too in reaction to the embargo, which includes soyabeans, meal and oil.

In London March barley futures closed £1.60 down at £95.20, and wheat £1.20 down £98.65.

Grain brokers anticipate that increased quantities of U.S. maize will be offered on European markets in the near term at sharply lower prices. Although offers to the UK market were slow to emerge yesterday, supplies of U.S. maize were offered in Rotterdam at $134 per tonne cif for January, a decline of $4 on prices before the weekend.

UK-produced soyabean meal declined £4 per tonne in nearby deliveries with Feb.-May trading at £121 and April-May £2 down at £120 per tonne ex-mill.

In Rotterdam, prices were heavily marked down from Friday's levels, with little buying activity evident. Maize was marked down $4 to $134 for January, while wheat fell $4 to $6 per tonne for nearby positions.

In Washington, U.S. grain and soyabean export trade was at a virtual standstill after the Administration's decision to suspend exports to the Soviet Union and closing of U.S. grain futures markets, U.S. exporters said.

"There is no buying whatsoever, since there are no futures markets on which to hedge sales and purchases," one exporter said. "The question is how the Government plans to keep the market from bottoming out."

The exporters and buyers are awaiting a decision from the Government on how to compensate the exporting firms and the farmers for lost sales and when to re-open futures trade.

The Winnipeg Commodity Exchange said it would trade grain and oilseed futures. The decision was taken at an emergency meeting yesterday of the exchange's governors following the U.S. markets ban.

Meanwhile in Washington the U.S. Commodity Futures Trading Commission said it will consider today whether to suspend trading in grain and soyabean futures beyond Wednesday if new information were received which would have serious impact on the market. The CFTC chairman James Stone has said the commission would *not*, however, extend the ban to precious metals.

A Chicago correspondent writes: Subdued and resigned opposition was the reaction of commodity brokers at the *Chicago Board of Trade* to the decision by the Commodities Futures Trading Commission to close grain trading at the exchange until Wednesday.

The Board of Trade chose not to challenge the suspension in court, but may change its mind if the CFTC does not permit a resumption of trading on Wednesday. A decision by a Federal court last September, severely limiting judicial relief when the CFTC invokes emergency powers, limited the Exchange's room for manoeuvre.

Concern that the American public may interpret a court challenge as an attempt to thwart President Carter's programme of retaliating against the USSR was another.

Brokers were quick to blame large multinational grain merchandisers for the emergency action. They claimed the merchandisers had immense "long" positions that would have cost huge sums of money had trading begun Monday morning and prices plummeted. A CFTC spokesman denied the action was taken because of pressure from the shippers, but conceded that discussions with them occurred Saturday following the embargo announcement on Friday night.

Some brokers suggest it would be desirable for the market to remain closed until government plans for disposing of the cancelled grain shipments to the USSR were clarified. But analysts here, unanimously agreed that the embargo was extremely bearish and predicted a sharp decline in prices regardless of government efforts to alleviate the impact of the new and unexpected grain glut.

They doubt government ownership of the grain would have much impact on the anticipated decline in prices when trading resumes "It changes ownership — it doesn't change supplies."

Metals react to nervous market

By Our Commodities Editor

COPPER PRICES fluctuated wildly yesterday reflecting the general nervous mood on the London metal markets.

Copper three months wirebars surged up to £1,130 a tonne in early trading following the upward trend in gold and reports of Japanese buying interest. But heavy selling then developed and the market fell to £1,048 before recovering late inter-office trading to £1,055.

Cash wirebars closed £7 down on the day at £1,044 a tonne, in spite of a further fall in LME warehouse stocks, down by 1,050 to 125,450 tonnes.

Tin values were sharply lower. The cash price closed *£135 down at £7,335* a tonne as the prospect of releases from the U.S. stockpile encouraged selling. A rise of 265 tonnes in stocks, raising total holdings to 2,005 tonnes, emphasised the easier nearby supply situation.

Lead prices took another battering. Cash lead fell by £20 to £490 a tonne. In the U.S. Asarco announced a further cut in its domestic price of 2 cents to 52 cents. Only last week it reduced the price by 3 cents from 55 cents.

Silver was marked up at the London bullion fixing in the morning, when the spot quotation was raised by 270.9p to 1,733.95p an ounce. However the market fell back on rumours of a possible closure of U.S. precious metal futures and cash closed around 1,600p.

LME silver stocks rose by 160,000 to 13,280,000 ounces. Zinc stocks increased by 2,200 to 48,200 tonnes; aluminium by 1,575 to 19,025 and nickel by 762 to 6,462. Lead holdings were unchanged at 17,525 tonnes.

Australian wool increase

CANBERRA — Australian wool production is expected to increase by 3.7 per cent in 1979/80 to 731,669 tonnes, up from 705,791 tonnes in 1978/79, but still well below the peak *of 793,479 tonnes in 1974/75*.

Estimates issued by the Statistics Bureau indicate shorn wool was expected to amount to 662,169 tonnes and other wool 69,500 tonnes.

Sheep numbers at March 31, 1980 are estimated at 137.3m,

RHODESIAN TOBACCO

Fast growth likely as sanctions end

BY MARK WEBSTER IN SALISBURY

RHODESIA WILL again start trading openly on the international tobacco markets from *April 7, after 14 years of sanctions*, during which the country has dealt secretly through middlemen, the Rhodesia Tobacco Association has said.

The association, which represents the country's 1,540 registered commercial tobacco farmers expects a good quality crop of 95m to 100m kilos thanks to the weather pattern of good rainfall.

It is the first time since UDI that Rhodesia has published any production figures and they still refuse to say officially how big the *crop has been since* 1965. However, tobacco growers say that last year's crop was a record for UDI years in terms of quantity because of the severe drought but that it was of poor quality.

Now that sanctions have been lifted, it is unlikely that Britain will ever regain the dominant position it held in the Rhodesian market. Befor UDI, the two British giants, Imperial Tobacco and Gallahers, accounted for around 50 per cent of total exports.

Mr. John Arkwright, general manager of Imperial Tobacco's Rhodesia Leaf organisation said he thought Imperial would adopt a cautious approach to the Rhodesian *market, waiting first* to see the outcome of the next *elections*.

"For the past 14 years when *Rhodesia was out of the running* we had to find our markets somewhere else and we have now established ourselves as regular buyers with about seven other countries, all of which have proved themselves politically stable. This country has yet to prove it is politically stable." *he said*.

Tobacco was the mainstay of the *Rhodesian economy before* UDI accounting for 40 per cent of gross national product. Although it is unclear how much that has now fallen it is still the biggest foreign exchange earner.

With sanctions lifted, Rhodesian tobacco farmers expect the industry to grow at around 10 per cent annually as increased profitability encourages white farmers to grow tobacco again and a land settlement scheme brings more black farmers into tobacco farming.

Tobacco farming was badly hit by the *imposition of sanctions* especially as the British market accounted for so much of production. But secret dealing encouraged a steady improvement in output.

The immediate impact of *sanctions* was to reduce dramatically the area under cultivation. In 1965, about 90,000 hectares of tobacco was grown but that figure has been reduced by about 30 per cent to the present area of 63,000 hectares, as farmers moved into other crops or in some cases, abandoned their farms altogether.

Since 1965, however, farmers have increased their output by adding to the area under cultivation and by using improved varieties and better farming techniques.

The new varieties have been developed at the country's own Kutsaga research centre and are more disease resistant. As a result of that and new farming techniques, yield has increased from 1,250 kilos per hectare in 1965 to nearly 1,600 kilos per hectare now.

Mr. Don Bulloch, president of the Tobacco Association, said that the most promising markets in the future for Rhodesian tobacco were the EEC and the Far East. To help the industry get off the ground quickly he would like to see preferential tariffs established. "Tariff advantages are the quickest way of putting this country back on its feet," he said.

Sugar market falls

BY JOHN EDWARDS, COMMODITIES EDITOR

WORLD SUGAR values dropped sharply on the London terminal market yesterday following the International Sugar Organisation's decision to raise export quotas for 1980 by 1,147,000 tonnes. The London daily price for raw sugar was only cut by £2 to £165 a tonne, but on the futures markets there were heavier losses. The March position closed £5.20 lower at £170.875 a tonne, after falling to £168 at one stage.

Some dealers pointed out that the rise in export quotas—announced late on Friday night—was largely in line with market expectations and had been largely discounted. They attributed the decline to speculative selling on fears that heavy losses in the grain and oilseeds futures, when they resume trading this week, would affect other "soft" (non-metal) markets as well.

At the same time, it is thought that many speculators, deciding that sugar is no longer on the way up, have switched to precious metals.

Whatever the reason for the *decline the International Sugar* Organisation appears to have achieved its initial objective of damping down the market and avoiding the automatic suspension of quotas, which would have resulted in a free for all.

At the insistence of consumer delegates the executive council of the International Sugar Organisation decided to meet again on Thursday to review the market and consider whether a further quota increase of 700,000 tonnes should be made.

Record avocado sales to Europe

ISRAEL'S EXPORTS of avocado pears to Europe in the first half of the current *export season* reached a record 12,000 tonnes, worth $15m and total exports of this fruit during the 1979-80 season are expected to reach 23,000 tonnes, with proceeds estimated at $33m.

Agrexco, the Israeli State marketing organisation, has cancelled a contract for one of the vessels intended for vegetable shipments, which are now expected to reach only 100,000 tonnes this season. Heavy rains have reduced supplies, with the result that home market prices have risen and become more attractive to some growers than sales abroad. The original target or vegetable shipments was 125,000 tonnes.

Reuter

BRITISH COMMODITY MARKETS

BASE METALS

COPPER—Lower on the London Metal Exchange. Another day of hectic trading saw forward metal moved ahead sharply on the pre-market to touch £1,130 following reports of Japanese buying interest. However, this level brought out heavy trade selling and profit-taking which caused the price to lose ground for the rest of the day despite various small rallies which petered out. Forward material dropped to below £1,090 on the morning kerb at which point renewed heavy stop-loss selling was reported. In the afternoon the price fell further to £1,046 before closing the late kerb at £1,048. *Prices steadied up in the late inter-office trading with three months* material trading at £1,065-60. Turnover 25,100 *tonnes*.

Amalgamated Metal Trading reported that in the morning cash wirebars traded at £1,062, 63, 62, three months £1,103, 01, 1,100, 1,099, 98, 97, 94, 92, 93, 92, 91, 90, 89, 87, 89, 90, 88. Cathodes, cash £1,025, three months £1,060, 59, 57. Kerb: Wirebars, three months £1,088, 87, 86, 87, 85, 84, 86. *Afternoon:* Wirebars, three months £1,065, 66, 67, 69, 70, 71, 70, 69, 70, 71, 72, 73, 74, 69, 70, 71, 72, 71, 70, 71. Cathodes, cash £1,015. Kerb: Wirebars, three months £1,070, 68, 68, 68, 69, 60, 54, 56, 60, 58, 57, 55, 53, 50, 51, 48, 47, 48, 49, 50, 49, 50, 48, 47, 48.

COPPER	a.m. Official	+ or −	p.m. Unofficial	+ or −
	£	£	£	£
Wirebars				
Cash	1061-2	+3	1043-5	−7
3 months	1087-9	+19	1070-1	−4
Settlem't	1062	+5	—	......
Cathodes				
Cash	1025-5	+1	1015-.5	−4.25
3 months	1056-7	+2	1044-5	−5.5
Settlem't	1085	+1	—	......
U.S. Prod	—	......	*110-12	......

TIN—Fell heavily following a fall at Penang, the downturn in copper and freer offerings of cash material which narrowed the backwardation to £120 at one point. After opening at £7,310 forward metal came under pressure from profit-taking and hedge selling which pared the price to the day's low of £7,210 on the late kerb. Turnover 825 tonnes.

Morning: Standard, cash £7,400, 7,390, 80, 70, three months £7,280, 70, 60, 60, 50, 40, 50. Afternoon: Standard, three months £7,230, 20, 10, 13. High Grade, three months £7,250. Kerb: Standard, three months £7,210.

TIN	a.m. Official	+ or −	p.m. Unofficial	+ or −
High Grade	£	£	£	£
Cash	7370-80	−127	7350-40	−135
3 months	7230-300	−40	7240-70	−75
Settlem't	7380	−125	—	......
Standard				
Cash	7370-80	−127	7380-40	−138
3 months	7240-50	−72.5	7210-5	−111
Settlem't	7380	−125	—	......
Straits E.	‡$2106	−5		......
New York	—	......		......

LEAD—Lost ground owing to influential selling and stop-loss selling coupled with the downturn in copper. *Forward metal* opened in the £492-3 region and fell away throughout the day before closing at £479 with the backwardation narrowing to around £5. Turnover 8,550 tonnes.

LEAD	a.m. Official	+ or −	p.m. Unoffic'l	+ or −
	£	£	£	£
Cash	493-4	−30.5	488-91	−20
3 months	487-.5	−24.2	484-6	−15.5
S'ment	494	−51	—	......
U.S. Spot	—	......	*52-55	......

Morning: Cash £497, 96, three months £490, 88, 89, 90, 91, 92, 91, 88, 87. Kerb: Three months £487, 86, 85, 86, 84, 83. Afternoon: Three months £483, 82, 83, 85, 86, 87, 86, 85. Kerb: Three months £484, 83, 81, 80, 82, 81.

ZINC—Held steady despite the reaction in copper and the decline in lead. Forward metal traded in a narrow range before dipping to close the late kerb at £338. Turnover 5,125 tonnes.

ZINC	a.m. Official	+ or −	p.m. Unoffic'l	+ or −
	£	£	£	£
Cash	385-87	−5.25	525-7	......
3 months	340-1	−6	341-2	+1
S'ment	537	−5	—	......
Prim w'st	—	......	*37.5	......

Morning: Cash £324, 25, three months £343, 42, 41.5, 41, 40, 39, 40, 41. Kerb: Three months £341. Afternoon: Three months £342, 43, 41, 40, 41, 42. Kerb: Three months £341, 42, 41, 40, 39, 40.

ALUMINIUM—Marginally easier on balance after a day of erratic movements. Heavy Commission House selling depressed forward metal from £885 to the low £860s in the morning before a good rally left the price at £870 on the morning kerb. In the afternoon renewed heavy selling developed and this caused a fresh fall to £856. However, towards the close a fresh rally was reported which left forward material at £862 on the late kerb. Turnover 8,850 tonnes.

Alumin'm	a.m. Official	+ or −	p.m. Unoffic'l	†+ or −
	£	£	£	£
Spot	889-91	−5.5	884-8	−6.5
3 months	869-70	−1	861-2	−5

Morning: Cash £890, three months £872, 71, 70, 69. Three months £869. Afternoon: Three months £865, 63, 60, 58, 57, 58, 56, 57, 58, 59, 60, 61, 62. Kerb: Three months £858, 59, 60, 61, 60.

NICKEL—Moved narrowly between £2,890 and £2,865 *prior to closing* the late kerb at £2,875 after a day of routine trading. Turnover 270 tonnes.

NICKEL	a.m. Official	+ or −	p.m. Unoffic'l	+ or −
Spot	2760-80	−70	2770-90	−50
3 months	2870-85	−52.5	2880-90	−7.5

Morning: Cash £2,800, three months £2,880, 80, 70, 80, 90, 80. Afternoon: Three months £2,865, 60, 77, 80. Kerb: Three months £2,885, 70, 75.

* Cents per pound. ‡ $M per picul. † On *previous unofficial* close.

SILVER

Silver was fixed 270.9p an ounce higher for spot delivery in the London bullion market yesterday at 1,733.95p. U.S. cent equivalents of the fixing levels were: spot 3900.0c, up 625c; three-month 4,031.6c, up 651c; six-month 4,077.6c, up 634.6c; and 12-month 4,185.3c, up 630.7c. The metal opened at 1,695-1,870p (3,800-4,200c) and closed at 1,580-1,700p (3,600-3,850c).

SILVER per troy oz.	Bullion fixing price	+ or −	L.M.E. p.m. Unoffic'l	+ or −
Spot	1733.95p	+270	1585.0p	−10
3 months	1800.95p	+282	1530.0p	......
6 months	1828.95p	+277	—	......
12 months	1885.95p	+277	—	......

LME—Turnover 213 (240) lots of 10,000 ozs. Morning: Three months 1720, 05, 1680, 50, 60, 70, 80, 1800, 1795, 90, 85, 90, 98. Kerb: Three months 1787, 90, 52.5. Afternoon: Three months 1750, 25, 25, 30, 25, 1700, 1690, 80, 75, 50, 40, 20, 40, 45, 50. Kerb: Three months 1655, 60, 50.

COCOA

Cocoa futures, trading in thin volume over a narrow range, closed this evening unchanged to the Friday closing call. Physicals remained largely ignored with producers and consumers both content to stand aside at current levels, reported Gill and Duffus.

COCOA	Yesterday's Close	+ or −	Business Done
March	1437-38	+1.0	1444-29
May	1438-40	+1.5	1445-35
July	1452-54	......	1459-47
Sep	1468-59	−4.5	1471-64
Dec	1493-95	+5.0	—
March	1490-80	−3.0	—
May	1595-45	+1.0	—

Sales: 538 (1,601) lots of 10 tonnes.

International Cocoa Organisation (U.S. cents per pound). Daily price Jan. 4: 140.37 (140.48). Indicator price Jan. 7: 15-day average 144.52 (144.78); 22-day average 143.60 (144.11).

COFFEE

After trading at unchanged levels basis January and March London coffee futures rallied £10 in quiet conditions, seemingly neglecting the early strength in sterling. With no fresh fundamental news the market appeared to be seeking direction in the afternoon and therefore was mainly influenced by a steady New York performance, reported Drexel Burnham Lambert.

COFFEE	Yesterday's Close	+ or −	Business Done
	£ per tonne		
January	1563-68	+4	1582-55
March	1574-70	+5.0	1582-64
May	1587-89	+14.0	1590-71
July	1595-600	+11.0	1602-82
Sept	1590-95	+09	1595-89
Nov	1585-97	+15.0	1578
January	1575-605	+20	—

Sales: 2,596 (6,681) lots of 5 tonnes.

ICS Indicator prices for Jan. 4 (cents per pound): Other Mild Arabicas 174.67 (171.17); Robustas ICA 1976 165.50 (169.34); ICA 1968 165.75 (169.46); Unwashed Arabicas 213.50 (213.00). Comp. daily ICA 1968 187.88 (187.45).

GRAINS

IMPORTED—Wheat: CWRS No. 1, $13\frac{1}{2}$ per cent unquoted; U.S. Dark Northern Spring No. 2 14 per cent unquoted; U.S. Hard Winter $13\frac{1}{2}$ per cent unquoted; EEC unquoted. Maize: French Jan. 116.50, Feb. 117.50 transhipment East Coast. Barley: English Feed fob *Jan.* 97.50, *Jan.-March* 99.00, April-June 105.00 transhipment East Coast.

WHEAT			BARLEY	
Mnth	Yest'rdays close	+ or −	Yest'rday close	+ or −
Jan.	94.70	−1.05	91.30	−1.55
Mar.	98.65	−1.20	95.30	−1.50
May	103.15	−1.10	99.30	−1.65
Sept	97.10	−0.85	95.45	−1.15
Nov.	100.65	−0.75	97.45	−0.65

Business done—Wheat: Jan. 95.00-94.65, March 99.10-98.85, May 103.40-103.05, *Sept.* 97.40-97.15, *Nov.* 101.05-100.95. Sales: 440 lots of 100 tonnes. Barley: Jan. 92.00-91.35, March 95.80-95.20, May 98.55-99.35, Sept. 94.55-93.55, Nov. no trade. Sales: 384 lots of 100 tonnes.

LONDON GRAIN FUTURES—The market opened 75 points lower but found nervous stop selling on fears of the American embargo spiralling to the EEC and values lost ground steadily during both sessions by the close on heavy shipper selling values had lost on wheat between 105-120 points and barley between 155-165 points. The barley was weaker since exports are more crucial to the trader mentality. New crops closed weak in sympathy between 65-75 points lower, reported Acli.

HGCA—Locational ex-farm spot prices. Other milling wheat: Eastern 98.00, E. Midlands 96.30, N. East 98.50. Feed barley: Eastern 92.80, E. Midlands 92.40, N. East 93.50.

RUBBER

The London physical market opened about unchanged, with fair interest throughout the day, closing uncertain. Lewis and Peat reported a Malaysian godown price of 307 (306) cents a kg (buyer, January).

No. 1 R.S.S.	Yest'rdays Close	Previous Close	Business Done
Feb.	69.25-70.50	68.50-70.00	—
Mar.	70.25-71.25	70.50-70.90	—
Apr-Jne	72.65-72.80	73.80-73.05	73.00-72.40
Jly-Sept	74.55-74.78	74.40-74.45	75.00-74.40
Oct-Dec	75.90-76.75	76.45-76.50	77.10-76.30
Jan-Mar	78.85-78.70	78.55-78.75	78.75-78.70
Apr-Jne	80.80-81.05	80.70-80.95	81.25-81.00
Jly-Sept	83.20-83.50	83.60-83.15	83.25-83.20
Oct-Dec	85.30-85.50	85.15-85.50	—

Sales: 275 (288) at 15 tonnes.

Physical closing prices (buyer) were: Spot 68.50p (same); Feb. 68.40p (68.50p); March 69.50p (same).

SOYABEAN MEAL

The market opened with substantial losses following the weekend announcement of the U.S. Grain Embargo, reported T. G. Roddick. Prices moved to limit losses of £5.00 and reopened with further falls before finding fresh speculative and trade buying interest. With most of the selling completed prices rallied to close on the highs with losses of £3-£4.

	Yest'rd'y Close	+ or −	Business Done
	£ per tonne		
February	119.80-19.0	−2.95	119.80-17.50
April	114.50-14.7	−3.75	115.40-15.80
June	115.60-15.7	−4.85	115.50-12.95
August	116.10-16.4	−5.75	115.80-15.00
October	114.06-14.5	−3.95	115.50-15.50
December	116.30-27.0	−3.95	
February	117.00-20.0	−3.0	—

Sales: 184 (55) lots of 100 tonnes.

SUGAR

LONDON DAILY PRICE (raw sugar): £165.00 (£167.00) a tonne cif for Jan.-Feb. shipment. White sugar daily price was £182.50 (£184.00).

The market was sharply lower. First trades were some £3.50 below pre-weekend levels. Stop-loss liquidation was touched off and by mid-day March had *fallen to £169.25. Prices lifted* by up to £3 above the low points following a higher opening in New York, reported C. Czarnikow.

Sugar Pref. Comm. Con.	Yest'rdays Close	Previous Close	Business Done
	£ per tonne		
March	170.75-71.00	178.45-75.50	179.5-68.80
May	173.50-74.00	178.50-78.45	166.00-70.75
Aug	174.50-74.60	178.15-78.30	179.50-71.50
Oct	174.50-74.50	177.50-78.05	178.00-74.00

Sales: 6,127 lots of 50 tonnes.

Tate and Lyle ex-refinery price for granulated basis white sugar was £318.70 (£304.95) a tonne for home *trade* and £243.00 (£245.50) for export.

International Sugar Agreement (U.S. cents per pound fob and stowed *Caribbean port*). *Prices for January 4*: Daily price 14.91 (14.75); 15-day average 14.85 (14.82).

NUMBER 4 CONTRACT—Close (in order buyer, seller only). May 172.50, 173.00; Aug. 173.00, 173.25; Oct. 172.75, 173.25; Jan. 171.50, 172.00; March 171.00, 174.00; May 172.00, 174.00. Sales 139 (339).

LONDON WHITE SUGAR—Close (in order buyer, seller, business, sales). Feb. 175.00, 185.00, 180.00-178.75, 69; April 176.00, 186.00, nil, nil; July 177.00, 187.00, nil, nil; Sept. 177.85, 188.00, nil, nil; Nov. 178.95, 189.00, nil, nil; Feb. 178.00, 190.00, nil, nil; April 179.00, 194.00, nil, nil. Sales 69.

PRICE CHANGES

In tonnes unless otherwise stated.

	Jan. 7 1980	+ or −	Month ago
Metals			
Aluminium	£760/70	......	£780/70
Free Mkt (cs)	$1850/1850	......	$1760/80
Copper			
Cash w'bar	£1,044	−7	£994.5
3 mths	£1,070.5	−4	£994.5
Cash Cathode	£1,015.25	−4.25	£959
3 mths	£1,044.5	−5.5	£973.5
Gold troy oz	$630	+40	$451.5
Lead cash	£490	−30	£554
3 mths	£485	−15.5	£538
Nickel	£3,260.17	......	£3,260.17
Freemkt(cif) (lb)	275/285c	......	270/316c
Platin'm tr'y oz	£198.0	......	£176.5
Free mkt	£340.50	+14.15	£252.80
Quicksil'ver	$360/390	......	$350/70
Silver troy oz	1755.95p	+270.9	877.00p
3 months	1800.95p	+282.8	904.80p
Tin Cash	£7,550	−135	£7,730
3 mths	£7,218.5	+112.5	£7,477.0
Tungsten 22.04lb	$138	......	$138.73
Wolfrm 22.04 lb	$155/158	......	$152.5/158
Zinc cash	£320	......	£557
3 months	£341.0	......	£344.70
Producers	$780	......	$780
Oils			
Coconut (Phil)	$880v	−5	$910
Groundnut	‡		
Linseed Crude	£368	−34	£404
Palm Malayan	‡		$647.0
Seeds			
Copra Philip	$570r	......	$600
Soyabean (U.S.)	$286.0z	−4.75	$291
Grains			
Barley Futures	£95.30	−1.90	£98.40
Maize			
French No3AM	‡		
Wheat			
No. 1 Red Spg	‡		
No2HardWint	‡		£107
Eng. Milling	‡		
Other commodities			
Cocoa ship't	£1,498	+1	£1,567
Future May	£1,439	+1.5	£1,491.0
CoffeeFt'r Mar	£1,574.5	+5.5	£1,696.5
Cotton A.Index	84.55c	−0.10	81.50c
Rubber (kilo)	68.50p	......	66.75p
Sugar (Raw)	£165	−2	£171
Wooltp's 64s kl	379p kilo	......	370pkilo

r Jan.-Feb. s Feb. v Jan./March. t March-April. u April. z Indicator. § Buyer.

JUTE

JUTE—Jan.-Feb. c. and f. Dundee: BWC £222, BWD £192, BTB £262, BTC £235, BTD £205. C. and f. Antwerp Jan.-Feb.: BWC $501, BWD $438, BTB $580, BTC $518, BTD $448. Jute Goods Jan. c. and f. Dundee: 40 in. 10 oz. £16.58, 40 in. 7.5 oz. £12.82. B twills £35.85.

COTTON

LIVERPOOL—Spot and shipment sales amounted to 288 tonnes. Further useful support was evident in American-type varieties. Operators wanted to keep in touch with values and interest ranged over numerous qualities.

MEAT/VEGETABLES

SMITHFIELD—pence per pound. Beef: Scotch killed sides 65.0 to 69.0; Eire hindquarters 80.0 to 83.0, forequarters 47.0 to 49.0. Veals: Dutch hinds and ends 114.0 to 161.0. Lamb: English small 60.0 to 64.0, medium 54.0 to 60.0, heavy 44.0 to 58.0; Scotch medium 54.0 to 60.0, heavy 44.0 to 56.0; Imported frozen NZ PL Old Season 50.5 to 52.0, NZ PL New Season 53.0 to 54.0. Pork: English, under 100 lbs 39.0 to 50.0, 100-120 lbs 40.0 to 49.0, 120-160 lbs 37.5 to 48.0.

MEAT COMMISSION—Average fatstock prices at representative markets on: January 7. GB—Cattle 80.21p per kglw (−2.11). UK—Sheep 138.8p per kg estdcw (−5.1). GB—Pigs 61.9p per kglw (−8.0).

AMERICAN MARKETS

NEW YORK, January 7.

AN UNPRECEDENTED suspension in grain and soyabean trading, following President Carter's embargo on shipments to the U.S.S.R., was the feature of the commodity markets. Spill-over selling developed in the livestock complex with all months locked limit down. Silver closed limit up, while gold registered another major advance as the political and military uncertainties continued. Sugar prices collapsed in response to a 1.1m metric tonne increase in the sugar quota and on possible limitations on sale to the Soviet Union. Profit-taking continued in cotton, severely depressing prices. Copper prices collapsed on speculative selling. The cocoa market advanced moderately in light trading. Good producer support attracted aggressive commission house buying in coffee, rallying prices sharply, Heinold reported.

Copper—Jan. 104.00 (108.60), Feb. 105.20 (110.0), March 106.50-106.50, May 107.00-107.50, July 107.50-108.00, Sept. 108.10, Dec. 108.00, Jan. 108.90, March 109.60, May 111.40, July 111.20, Sept. 112.00.

Potatoes (round whites)—March 59.0-59.8 (61.2), April 60.0-66.5 (68.2), May 73.8-74.1, Nov. —. Sales: 1,105.

Tin—77,600-795.00 asked (794.00-796.00).

Lard—Chicago loose 22.00 (same). New York prime steam unavailable.

Live Cattle—Jan. 65.77 (67.27), Feb. 68.97 (70.47), April 71.47, June 73.07, Aug. 73.17, Oct. 71.70, Dec. 72.80, Jan.

Live Hogs—Feb. 41.37 (42.87), April 39.95 (41.45), June 43.95, July 44.90, Aug. 43.77, Oct. 42.70, Dec. 44.42, Feb 45.50, April 44.50.

Pork Bellies—March 65.45-66.60 (65.22), May 66.35-66.50 (65.25), July 66.50-66.60, Aug. 64.75. Sales: 4,842.

*Platinum—Jan. 748.00 (767.30); Feb. (unquoted), April 763.00-767.00, July 766.50, Oct. 771.50, Jan. 774.00, April unquoted. Sales 3,239.

Silver—Jan. 3565.0-2500.0 (3595.0), Feb. 3375.0 (3255.0), March 3757.0, April 3428.5, June 3474.5, Aug. 3515.0, Oct. 3555.5, Dec. 3596.0, Feb. 3625.5, April 3676.9, June 3717.2, Aug. 3757.5, Oct. 3797.5, Dec. 337.5, Feb. 3877.4, April 3917.2, June 3358.5, Aug. 3956.5.

★

CHICAGO, January 7.

Trading was temporarily halted in the following markets: maize, soyabeans, soyabean meal, soyabean oil and wheat.

WINNIPEG, January 7.

§Barley—March 118.00 (123.00), May 117.50 (122.50), July 115.10, Oct. 109.60.

§Wheat—SCWRS 13.5 per cent protein content cif St. Lawrence 242.60 (242.35).

All cents per pound ex-warehouse unless otherwise stated. * $ per troy ounce. ¶ Cents per troy ounce. ‡‡ Cents per 56-lb bushel. † Cents per 60-lb bushel. || $ per short ton (2,000 lbs). § $Can. per metric ton. §§ $ per 1,000 sq. feet. ‡ Cents per dozen.

EUROPEAN MARKETS

ROTTERDAM, January 7.

Wheat—U.S. Two Dark Hard Winter wheat 13.5 per cent Feb. $208, March $210. U.S. Hard Winter wheat ordinary unquoted. U.S. No Two Red Winter wheat Feb. $190, March $192. U.S. No Two Northern Spring wheat 14 per cent Dec. $208, Jan. $206, Feb. $208, March $210, April/May $198, May/June 198, June/July 200.

Maize—U.S. No Three Yellow AFL $135, Jan. $134, Feb. $135, March $138, April/June 143, July/Sept. $149, Oct./Dec. $150.

Soyabeans—U.S. Two Yellow Gulf ports Jan. $262.50, Feb. $270, March $273.50, April $279.50, May $281.50, June $287, July $289, Aug. 292, Sept. 294.50, Oct. 297.50, Nov. $296.50, Dec. $303 sellers. Argentine unquoted. Brazil yellow FAQ unquoted.

Soyameal—44 per cent protein U.S. Jan. $241, Jan./March $240, April/Sept. $241 traded, AFL $253 sellers. Brazil pellets April/Sept. $245 traded, Jan. $256, Feb. $255.50, April/May $240, April/Sept. $246 sellers.

PARIS, January 7.

Cocoa (FFr. per 100 kilos). March 1298/1300, May 1300/1305, July 1305, Sept. 1320/1345, Dec. 1330/1350, March 1335/1350. Sales at call 1.

Sugar (FFr per 100 kilos). March 1621/1623, May 1620/1632, July 1630/1640, Aug. 1631/1642, Oct. 1630/1680, Nov. 1625-1655, Dec. 1640/1670, March 1690/1690. Sales at call 3.

INDICES

FINANCIAL TIMES

Jan. 4	Jan. 3	M'nth ago	Year ago
294.40	295.03	297.22	257.75

(Base: July 1, 1952=100)

MOODY'S

Jan. 4	Jan. 3	M'nth ago	Year ago
—	1198.1	1193.8	977.2

(December 31, 1931=100)

DOW JONES

Dow Jones	Jan. 4	Jan. 3	Month ago	Year ago
Spot	410.18	415.69	415.18	364.06
F'tur's	424.07	422.64	418.49	395.38

(Average 1924-25-26=100)

REUTERS

Jan. 7	Jan. 4	M'nth ago	Year ago
1663.6	1702.7	1701.9	1491.8

(Base: September 18, 1931=100)

WOOL FUTURES

BRADFORD—Traders said quoted prices remain on the higher basis reached last week, but firmly higher traded prices have not yet been established. The rises were basically protective due to the international crisis and reluctance among holders of wool to sell.

LONDON GREASY WOOL—Close (in order buyer, seller only). Pence per pound. March-May-July-Oct.-Dec.-March-May-July all 232.0, 242.0.

NEW ZEALAND CROSSBREDS—Close (in order buyer, seller only)... March-May-July-Oct.-Dec.-March-May-July all 188.0, 188.0.

SYDNEY GREASY WOOL—Close (in order: buyer, seller, business, sales). Australian cents per pound. Micron Contract: March 441.0, 444.0, 450.0-439.0, 106; May 466.0, 470.0, 477.0-458.0, 201; July 486.0, 488.5, 490.0-483.0, 270; Oct. 476.0, 481.0, 485.5-481.0, 118; Dec. 480.0, 485.0, 455.0-482.0, 60; March 487.0, 490.0, 490.0-486.0, 50; May 489.0, 490.0, 490.0-489.0, 10; July 485.0, 470.0, 490.0-496.6, 5. Sales: 820.

TEA AUCTION

LONDON TEA AUCTION—53,752 packages were offered at yesterday's auction. Assams were generally 6p to 8p lower except the few brighter lines, which were firm to dearer. Bright Africans sold well but did not always realise valuations. Mediums were very irregular but often shed 2p to 3p. Plain sorts were generally lower but plainest types met better support and tended dearer. The few bright Ceylons sold well but others were mainly 3p to 5p lower, with plainest teas neglected. Price indications for the week: Quality 145p per kilo (150p); Medium 112p (113p); Plain 55p (57p).

CORAL INDEX: Close 418-423 (+7)

Hopes of steel strike settlement lift equity leaders
Gilts also encouraged—Golds active but below best

Account Dealing Dates
Options

*First Dealings	Declara-tions	Last Dealings	Account Day
Dec. 10	Dec. 20	Dec. 27	Jan. 7
Dec. 28	Jan. 10	Jan. 11	Jan. 21
Jan. 14	Jan. 24	Jan. 25	Feb. 4
Jan. 28	Feb. 7	Feb. 8	Feb. 18

* "New time" dealings may take place from 9.30 am two business days earlier.

Stock markets begao the final leg of the trading Accouot with both maio iovestment sections still reflectiog optimism about a solution being found to eod the steel dispute. Seotiment oo this poiot more than outweighed the effects of the tense international situatioo aod further gloomy surveys about UK economic trends.

South African Gold shares opened with a flourish following the week-end upsurge io the bullion price, but interest failed to reach the high levels of last week. A good two-way business developed as prices drifted back from the best and, after some U.S. inquiry, the late tone was described as mixed. Gains among heavyweight issues finally ranged to a point and the FT Gold Mines index rebounded 6.2 to 286.4.

Gilt-edged securities were not disturbed by the prospect of interest rates remainiog at record high levels for some time. Investment enthusiasm was oo a limited scale, but sufficient to enable quotations to regain early losses, extending to ¼ in some cases, and settle a fraction higher on balance.

Bowring jump late

Against the trend, Exchequer 15 per cent 1985 lost ⅛ to 101⅝ oo the view that the stock could face competition from the new tap announced last Friday; subscriptions lists for the latter, Exchequer 14 per cent 1984, close oo Thursday and dealiogs begin on Friday.

Rumours conoected with yesterday's negotiations io the steel dispute encouraged a fresh advance io Gilts and leading equities after the official close of trade. Sellers of quality shares were conspicuous by their absence throughout the session and only a light demand was sufficient to put values up. The FT 30-share Index, down 1.1 at 10 am, closed at the day's highest with a gaio of 6.0 at 419.9.

Demand for Traded options fell away and only 293 cootracts were completed, agaiost Friday's 856 and last week's daily average of 618. Only Cons. Gold Fields, 102 trades, aod Grand Met., 50, attracted a reasonable busioess.

Bowriog jumped 19 to 142p in busy after-hours' trading on Marsh and McLellan's announcement that if the company agrees oot to thwart the offer, the latter intends to bid for all Bowring's ordinary and convertible loan stock in a cash and share deal worth around £175m. Other Lloyds brokers closed firmer after the report; Hogg Robinson, which iodicated last Friday that it may take over the insurance interests of H. Clarkson (Holdings) in a £6m deal, closed 3 better at 86p, while C. E. Heath advanced 8 to 193p and improvements of around 3 were recorded in Alexander Howden, 98p, Sedgwick Forbes, 92p, aod Willis Faber, 210p.

Quietly firm conditions also prevailed in the major clearing banks. Helped by oo iovestmeot recommendation, NatWest put on 4 to 342p, while Lloyds closed a like amount higher at 300p. Elsewhere, Corinthian Holdings continued firmly at 31p, up a peony.

A firm uodertone was apparent in Breweries and kindred issues. Bass, 192p, and Whitbread, 131p, both added a couple of pence, while Scottish and Newcastle hardened a shade to 60½p. Regional issues were subdued, but gains of 2 were seen in Wolverhampton and Dudley, 269p, and Davenports', 143p. Distillers gained 3 to 198p, but other Wines aod Spirits tended to hold aroond pre-weekend levels.

The Building sector was featured by Bioe Circle io which a squeeze on bear positions lifted the price 12 to 252p. Other leading issues made modest progress oo small buyiog with Ready Mixed Concrete and Redland adding a couple of peoce apiece to 128p and 176p respectively. Among housebuilders, Gough Cooper, a dull market of late on the outlook for mortgage rates, also added a penny, to 69p.

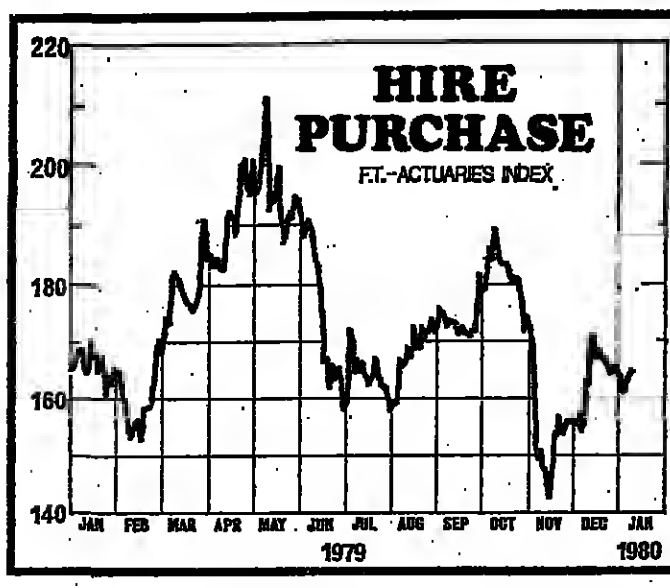
A penny easier initially on nervous offerings, ICI subseqeotly saw buyers as hopes grew about a settlemeot to the steel dispute and the close was 5 up on balance ot 363p; the annual results are due oo February 28. Elsewhere in the Chemical sector, oil exploratioo concern Norsk Hydro attracted renewed support and put oo 2½ to £64½.

Burton fall

Adverse commeot brought selling pressure to bear oo Burton "A" which touched 208p before closing a net 4 down on balance at 216o. Marks and Spencer, on the other hand, rose 3 to 82p in respoose to an iovestment recommeodation and Gussies "A" gained 4 to 346p for a similar reason. H. Samuel "A" put on 10 to 135p following the favourable interim statement, while fellow jewellery concern Ernest Jones put on 4 to 166p. Home Charm added 8 to 152p following Press comment aod A. G. Stanley improved 3 to 64p in sympathy. Up 8 last Friday on buying ahead of Thursday's interim results aod on vague suggestions that H. Samuel may launch a bid, Ratners improved initially to 60p but finished 2 easier on balance at 56p. Cope Sportswear also decliued that much, to 36p as did Kunick, to 15p. Among Shoes, Pittard came on offer at 43p, down 5.

Revived hopes of a bid from Racal stimulated demand for Decca, the ordioary rising 20 to 325p with the "A" 24 to 293p; Racal also found support aod closed 8 to the good at 198p, after 201p. Other secoodary Electricals cootinued last Friday's recovery movemeot with Ferranti improviog 13 to 420p in an extremely thio market. Farnell, 234p, and Electrocomponents, 423p, firmed 6 apiece, while Unitech improved 4 to 214o aod Eurotherm 3 to 270p. Leading issues made a quietly firm showing; GEC gained 2 to 337p and Plessey 3 to 111p.

Still reflectiog hopes of an early end to the steel dispute, leading Engineers maintained a firmer trend. GKN improved 4 more to 245p with Hawker a similar amount dearer at 186p. John Brown hardeoed 1½ to 55p, while Vickers continued to respood to a recent investment recommendation and gained 5 further to 111½p. Secoodary issues finished the day with scattered improvements, week-end Press mention stimulating buying. Interest in Howden Group, 3 higher at 63p, and Alcan Aluminium, 3½ to the good at 89½p. Deritend, 135p, and Adwest, 192p, firmed 4 apiece, while revived speculative demand lifted CompAir 3 to 73p. Mining Supplies continued firmly at 84p, up 2, and similar gains were marked against IMI, 46½p, RHP, 72½p, and Delta Metal, 55p.



Foods made progress under the lead of Kwik Save which put on 6 to 108p. Associated Dairies firmed 4 to 168p; the interim results are due at the end of the mooth. Interest was shown in Northern which pot oo 3 to 113p, while Tate and Lyle hardeoed 2 to 144p and Associated Biscuit added a penny to 80p. A. B. Foods held at 85p; the xr against the share price in last Saturday's issue was shown in error. Elsewhere, A. G. Barr firmed 2 to 114p in response to the higher annual profits and divideod, but receotly firm Albert Fisher met profit-taking and shed a penny to 13p.

In firm Hotels aod Caterers, Grand Metropolitan put on 4 to 132p aod Trusthouse Forte added 3 to 137p; the latter's annual results are due next week.

Misc. leaders better

Hopes that the steelworkers' dispute would soon be resolved pushed the miscellaneous industrials higher in thin trading yesterday. After a hesitant start, prices edged forward with Glaxo closing a net 5 dearer at 440p, after 433p, and Metal Box 6 up at 238p. Beecham put on 3 to 119p as did Boots, to 162p, and Turner and Newall, to 125p. Elsewhere, consideration of the company's £16m acquisition of Kearley and Tonge and a favourable broker's circular helped Booker McConnell put on 10 to 265p. Negretti and Zambra improved 2 to 40p on news that the mooted asset sales have been completed and Brengreen put on 2 to 20½p in response to Press comment. Hanson Trust came in for support at 130p, up 8, while Hays Wharf closed a like amount higher at 127p. Thomas Tilling hardened 4 to 108p and Grimshawe, following acquisition details, added 5 to 65p. Kennedy Smale closed 6 firmer at 59p, while improvements of around 5 were seeo in Clement Clarke, 103p, Carlton Industries, 280p, and Dalgety, 260p. De La Rue rose 15 to 555p. Howard Teoens dipped 2½ more to 60p after adverse comment, while Jardine Matheson lost 9 to 138p and Avon Rubber declined 5 to 124p.

Press comment predicting a gloomy year for BL led to an easier tooe among selected Motor Distributors. Appleyard were hardest hit, falling 4 to 58p, while Henlys shed a couple of peoce to 90p, and Manor National, 20½p, and Lookers, 41p both gave up a penny. Investment recommendations prompted rises of 3 and 2 respectively in Supra, 68p, and Associated Engineering, 74p, while hopes of a quick settlement io the steel dispute lifted Dowty 3 to 154p, and Lucas 2 to 232p.

Associated Newspapers attracted support in froot of Friday's mid-term statement and closed 9 to the good at 260p. Daily Mail A, also reporting that day, rose 8 to 443p, while a favourable Press mention helped Home Counties to a rise of 5 at 102p. Elsewhere, occasional support was ooted for Transparent Paper, 4 up at 45p, and for DRG, 3 better ot 92p. Paper makers James Cropper cootioued to beoefit from recent Press comment and further speculative buyiog lifted the shares 7 for a two-day gain of 19 at 107p.

Gaios in the Property sector were sometimes exaggerated by stock shortage. Land Securities firmed 5 to 252p and MEPC 4 to 163p, while Hammersoo A added 10 more to 725p. Peachey came in for support following favourable Press mention and put oo 5 to 119p. Buyers showed interest in British Land which improved 1½ to 59p, while Scottish Metropolitan and Capital and Counties added a couple of pence apiece to 115p and 89p respectively. Improvements of 4 were recorded in Haslemere, 268p, Great Portland Estates, 190p, and Samuel, 101p. Warnford Investments, 360p, and Imry, 485p, both added 5 in thin markets; the latter's half-yearly results are due tomorrow.

Aran advance

Once again, interest in the Oil sector centred chiefly on secondary issues and Aran Energy featured with a rise of 32 to 260p in response to the announcement that the company is exercising its right to increase its interest in blocks 26/22 and 26/28 in the Porcupine Basin of the Irish Sea. Other firm spots included Cluff, 20 higher at 410p, and Clyde, 7 to the good at 320p. In contrast, Siebens (UK) reacted 1½ to 412p after receot firmness on Press mention. Bid speculatioo faded in Silkolene which closed 16 cheaper at 132p. Scattered selling and lack of support made for dullness in the leaders, British Petroleum easing 8 to 323p and Shell 6 to 314p.

Among Financial Trusts, Britannia Arrow respooded to favourable Press mention with a rise of 1½ to 22p. Dealings were temporarily suspended in West of England Trust prior to the anoouncement of an agreed bid in unsecured loan stock from Globe Investment.

Worries about the repercussions on charter rates of the proposed *suspension* of grain exports from the U.S. to Russia prompted selling of Shipping shares.

Among South African industrials, fresh support was forthcoming for Tiger Oats, 30 up at 580p, and Abercom, 7 better at 130p.

News of Mrs. Gandhi's election victory in India prompted firmness among Teas. Williamson rose 8 to 190p, while Warren, 135p, and Assam Investments, 99p, put on 6 and 4 respectively.

Golds rally

Golds extended the rally which developed late on Friday evening as a fresh burst of strength in the bullioo price—it closed $40 up at $630 an ounce after touching $675 in overnight Hong Kong markets—prompted jobbers to mark up prices at the outset.

Thereafter, a heavy two-way business developed with profit-takers gaining the upper hand towards the close and in the late after-hours trade. The Gold Mines index registered a 6.2 rise at 286.4.

Among the heavyweights, "Amgold" registered extremes of $94 and $86 before settling at $89—a point better on balance at £39½ in sterling terms, while West Driefontein added a like amount at £31⅞, East Driefontein a half-point at £10⅞, and Buffels ⅛ at £13.

In the medium and lower-priced stocks, Doornfontein, 54 up at a 1979-80 high of 494p, Libanon, 41 firmer at 766p, and Venterspost, 43 to the good at a high of 488p, were prominent ahead of the Gold Fields group December quarterly gold mine profits which are due to be published tomorrow.

Financials attracted stroog buying along with Golds. In the South African sectioo, coal issues "Amcoal" and Transvaal Consolidated Land rose a point apiece to £11½ aod £17½ respectively, while, in Diamoods, De Beers advanced 13 to 483p; the Central Selling Organisation's 1979 world sale figure is expected this week.

London Financials were marked up sharply at the outset but came in for persistent profit-taking later. Gold Fields touched a 1979-80 high of 429p before closing 11 up on balance at 425p, while Rio Tinto-Zinc touched 354p prior to closing a net 6 firmer at 346p.

Jobbers in Australian issues reported another day of hectic activity, with gold-related stocks moving erratically.

Poseidon opened at 132p and fell back to 125p before closing 8 up on balance at 126p, while North Kalgurli were finally unchanged at 48p, after extremes of 52p and 46p.

The participants in the Ashton diamood venture became uncertain ahead of the January progress report which is expected soon. Northern Mining managed a rise of 4 at 140p but Ashton Mining and Conzinc Riotinto both closed 2 cheaper at 142p and 246p respectively.

Oil and energy stocks attracted a wave of fresh speculative support which lifted Lennard Oil 30 to 90p and Oil and Mineral Quest 4 to 17p, with the latter additionally helped by favourable weekend Press mention.

FINANCIAL TIMES STOCK INDICES

	Jan. 7	Jan. 4	Jan. 3	Jan. 2	Dec. 31	Dec. 28	A year ago
Government Secs.	66.07	65.09	64.50	64.61	65.10	65.48	68.58
Fixed Interest	66.06	65.94	65.45	65.61	65.93	65.89	70.58
Industrial	419.9	413.9	406.9	407.0	414.2	417.8	484.9
Gold Mines	286.4	280.2	303.1	283.9	266.1	270.0	160.4
Ord. Div. Yield	7.75	7.85	7.97	7.96	7.84	7.77	5.96
Earnings, Yld. % (full)	19.29	19.54	19.83	19.81	19.51	19.33	16.88
P/E Ratio (net) (*)	6.38	6.30	6.21	6.28	6.31	6.37	8.20
Total bargains	20,425	20,578	19,955	14,099	12,564	14,397	—
Equity turnover £m	—	82.06	96.17	85.690	40.57	43.55	51.38
Equity bargains total	—	13,379	14,787	10,594	8,106	8,900	10,841

10 am 412.8. 11 am 415.0. Noon 416.8. 1 pm 417.2.
2 pm 417.3. 3 pm 417.6.
Latest Index 01-246 8026.
*Nil=6.19.

Basis 100 Govt. Secs. 15/10/26. Fixed Int. 1928. Industrial Ord. 1/7/35. Gold Mines 12/9/55. SE Activity July-Dec. 1942.

HIGHS AND LOWS

	1979/80 High	1979/80 Low	Since Compilat'n High	Since Compilat'n Low
Govt. Secs.	75.91 (4/5)	65.30 (18/12)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Int.	77.78 (5/6)	64.06 (15/11)	130.4 (28/11/47)	50.53 (3/1/75)
Ind. Ord.	558.2 (4/5)	406.3 (15/11)	558.6 (4/5/79)	49.4 (26/6/40)
Gold Mines	303.1 (3/1/80)	129.9 (17/4)	442.3 (22/5/75)	43.5 (26/10/71)

S.E. ACTIVITY

	Jan. 7	Jan. 4
—Daily		
Gilt Edged	167.6	132.5
Industrials	112.5	112.5
Speculative	141.5	180.8
Totals	89.3	98.1
5-d'y A'v'r'ge		
Gilt Edged	117.6	100.3
Industrials	86.4	73.4
Speculative	116.3	96.1
Totals	69.6	60.6

NEW HIGHS AND LOWS FOR 1979/80

The following securities quoted in the Share Information Service yesterday attained new Highs and Lows for 1979-80.

NEW HIGHS (16)

AMERICANS (1)
Asarco Inc.
INDUSTRIALS (2)
Sielox Manufacturing Tebbitt
OILS (4)
Aran Energy Cluff Oil
Century KCA
MINES (9)
Wit. Nigel UC Investments
Doornfontein Falcon
Venterspost Roan Cons.
Cons. Gold Fields Pacific Copper
Silvermines

NEW LOWS (33)

AMERICANS (4)
Colgate-Palmolive Exxon
Ingersoll Rand Texaco
Kaiser Aluminium Xerox Corp.
BANKS (1)
Algemene
BUILDINGS (1)
Ibstock Johnsen
CHEMICALS (1)
Akzo
STORES (3)
Cope Sports Wear Liberty Nos Vtg. Ord.
Kunick
ELECTRICALS (1)
Dewhurst "A"
FOODS (2)
Alpine Soft Drinks Barr (A. G.)
INDUSTRIALS (3)
Avon Rubber Whitecroft
Hawkins & Tipson
MOTORS (2)
Appleyard Lookers
Henlys
PAPERS (2)
BPC Smith (David)
PROPERTY (1)
Hartley Ind. Trust
TEXTILES (5)
Carpets Int. Nottingham Manfg.
Beckman (A.) Martin (A.)
Shiloh Spinners
TRUSTS (2)
Martin (R. P.) Boustead
TEAS (1)
Ruo Estates

RISES AND FALLS YESTERDAY

	Up	Down	Same
British Funds	33	9	45
Corpns. Dom. and Foreign Bonds	8	2	58
Industrials	314	140	848
Financial and Prop.	136	36	291
Oils	20	11	11
Plantations	1	15	15
Mines	67	30	45
Others	67	30	65
Totals	718	257	1,489

FT-ACTUARIES SHARE INDICES

These indices are the joint compilation of the Financial Times, the Institute of Actuaries and the Faculty of Actuaries

EQUITY GROUPS & SUB-SECTIONS. Figures in parentheses show number of stocks per section	Mon., Jan. 7, 1980 Index No.	Day's Change %	Est. Earnings Yield % (Max.)	Gross Div. Yield % (ACT at 30%)	Est. P/E Ratio (Net)	Fri., Jan. 4 Index No.	Thurs., Jan. 3 Index No.	Wed., Jan. 2 Index No.	Mon., Dec. 31 Index No.	Year ago (approx.) Index No.
1 CAPITAL GOODS (172)	213.82	+1.0	20.14	7.21	6.29	211.52	208.87	210.00	213.41	236.81
2 Building Materials (27)	196.82	+1.0	19.97	7.61	6.42	194.79	194.00	195.99	198.19	208.24
3 Contracting, Construction (29)	317.41	+0.9	29.09	7.55	4.25	314.57	313.00	317.97	324.73	362.16
4 Electricals (15)	555.37	+0.7	14.51	4.47	9.19	551.25	539.85	539.54	549.67	555.75
5 Engineering Contractors (11)	279.56	+0.8	27.74	9.16	4.61	277.45	278.64	285.25	287.68	360.61
6 Mechanical Engineering (74)	150.45	+1.2	22.08	8.54	5.63	148.61	146.46	147.71	149.78	184.79
8 Metals and Metal Forming (16)	147.22	+1.6	22.61	10.31	5.33	144.93	142.90	141.95	144.90	164.80
11 CONSUMER GOODS (DURABLE) (53)	192.73	+1.6	18.64	6.50	6.83	189.68	184.82	186.58	190.39	210.79
12 Lt. Electronics, Radio, TV (15)	260.99	+2.1	14.89	4.92	8.57	255.67	247.36	249.72	256.13	266.79
13 Household Goods (14)	112.72	+0.6	26.85	9.61	4.51	112.06	111.74	114.00	116.40	166.05
14 Motors and Distributors (24)	104.36	+0.7	25.71	8.86	4.59	103.61	102.10	102.80	103.62	121.94
21 CONSUMER GOODS (NON-DURABLE) (173)	205.39	+1.3	19.49	7.31	6.34	202.84	200.15	201.70	203.74	211.36
22 Breweries (14)	254.12	+0.9	17.22	6.88	6.82	251.83	248.93	250.53	252.84	233.96
23 Wines and Spirits (6)	296.09	+1.4	18.16	6.19	6.80	292.00	293.65	290.51	293.13	289.27
24 Entertainment, Catering (17)	279.11	+2.4	18.93	7.87	6.86	272.54	268.57	269.49	273.46	276.86
25 Food Manufacturing (19)	190.87	+0.6	21.23	7.62	5.83	189.79	187.29	188.85	190.18	201.32
26 Food Retailing (15)	294.18	+1.2	14.00	4.82	8.54	290.59	286.28	289.88	294.00	233.18
32 Newspapers, Publishing (12)	387.29	+0.7	24.52	7.52	5.64	384.58	378.52	381.40	384.20	382.70
33 Packaging and Paper (15)	134.12	+1.0	20.62	9.95	4.95	132.86	131.38	131.94	135.25	145.09
34 Stores (43)	193.91	+1.5	15.88	5.84	8.13	191.09	188.71	189.45	192.70	195.09
35 Textiles (25)	125.69	+0.7	28.94	12.86	4.38	124.85	123.65	124.31	125.57	162.60
36 Tobaccos (3)	200.86	+1.8	28.38	11.10	3.90	197.40	192.85	197.98	198.97	238.22
37 Toys and Games (6)	46.71	+2.1	35.60	15.33	3.81	45.76	45.58	47.17	47.99	72.08
41 OTHER GROUPS (98)	188.18	+1.2	16.62	7.14	7.53	185.89	184.19	185.23	187.38	198.98
42 Chemicals (18)	282.90	+1.0	17.25	7.06	6.70	279.91	276.80	276.84	277.21	279.57
43 Pharmaceutical Products (7)	196.44	+1.8	12.96	6.59	9.41	192.91	192.71	192.35	194.88	209.86
44 Office Equipment (6)	104.25	+0.8	19.18	8.10	6.20	103.40	101.86	102.62	103.77	117.27
45 Shipping (10)	416.48	−1.7	12.71	7.75	10.04	423.84	418.69	423.88	424.10	414.88
46 Miscellaneous (57)	217.86	+1.8	18.03	7.23	7.03	214.07	211.86	212.86	218.27	214.35
49 INDUSTRIAL GROUP (493)	208.97	+1.2	18.89	7.17	6.56	206.46	203.76	205.30	207.70	221.46
51 Oils (7)	579.50	−2.0	13.79	5.13	7.96	591.47	596.43	609.27	589.10	[illegible]
59 500 SHARE INDEX	249.34	+0.5	16.46	7.16	6.54	248.14	245.45	247.76	248.28	[illegible]
61 FINANCIAL GROUP (117)	174.41	+1.0	—	6.15	—	172.55	170.86	172.56	175.16	[illegible]
62 Banks (6)	216.53	+0.6	38.41	6.00	3.32	215.25	211.99	214.33	220.33	[illegible]
63 Discount Houses (10)	213.03	—	—	9.51	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
64 Hire Purchase (5)	153.12	+1.2	21.44	5.76	5.91	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
65 Insurance (Life) (10)	155.36	−0.1	—	6.86	—	155.45	151.88	155.32	156.30	137.71
66 Insurance (Composite) (8)	119.93	+0.6	—	8.17	—	118.59	117.05	119.03	120.67	124.65
67 Insurance Brokers (10)	271.64	+5.2	18.36	7.19	7.79	258.22	254.40	263.80	267.55	312.52
68 Merchant Banks (14)	87.62	+0.7	—	6.66	—	87.02	86.10	87.85	88.71	[illegible]
69 Property (44)	311.79	+1.5	4.23	3.44	33.90	307.21	304.20	310.60	313.63	277.48
70 Miscellaneous (10)	121.54	+0.3	15.64	7.45	8.32	121.28	119.62	120.11	121.39	114.62
71 Investment Trusts (109)	192.53	+1.0	—	6.37	—	190.68	188.97	191.08	192.49	208.27
81 Mining Finance (4)	179.58	+2.0	13.28	5.69	9.14	176.21	176.10	178.96	181.66	[illegible]
91 Overseas Traders (20)	333.11	+0.2	15.07	7.52	8.01	332.51	330.85	332.64	332.39	[illegible]
99 ALL-SHARE INDEX (750)	229.15	+0.7	—	6.89	—	227.61	225.06	227.36	229.73	229.74

FIXED INTEREST PRICE INDICES

British Government	Mon., Jan. 7	Day's change %	xd adj. today	xd adj. 1980 to date
1 Under 5 years	100.51	+0.10	—	0.00
2 5-15 years	103.38	+0.02	—	0.00
3 Over 15 years	107.00	+0.02	—	0.00
4 Irredeemables	119.99	—	—	0.00
5 All stocks	103.33	+0.04	—	0.00

FIXED INTEREST YIELDS British Govt. Av. Gross Red.		Mon., Jan. 7	Fri., Jan. 4	Year ago (approx.)
1 Low Coupons	5 years	12.51	12.53	9.67
2	15 years	12.57	12.57	11.40
3	25 years	12.74	12.73	12.22
4 Medium Coupons	5 years	14.70	14.71	12.71
5	15 years	14.36	14.36	12.80
6	25 years	14.28	14.28	12.90
7 High Coupons	5 years	15.06	15.06	12.98
8	15 years	14.89	14.89	13.10
9	25 years	14.60	14.60	13.04
10 Irredeemables		12.24	12.23	12.01

	Mon., Jan. 7 Index No.	Yield %	Friday Jan. 4	Thurs. Jan. 3	Wed. Jan. 2	Mon. Dec. 31	Friday Dec. 28	Thurs. Dec. 27	Mon. Dec. 24	Year ago (approx.)
15 20-yr. Red. Deb & Loans (15)	49.12	†15.03	49.22	49.24	49.33	49.26	49.53	49.33	49.35	54.80
16 Investment Trust Prefs. (15)	46.45	14.47	46.34	46.34	46.34	46.34	46.21	46.21	46.22	51.83
17 Coml. and Indl. Prefs. (20)	61.24	14.62	61.28	61.36	61.51	61.28	61.19	61.19	61.12	72.33

† Redemption yield. Highs and lows record base dates and values and constituent changes are published in Saturday issues. A list of the constituents is available from the Publishers, the Financial Times, Bracken House, Cannon Street, London, EC4P 4BY, price 14p, by post 22p.

ACTIVE STOCKS

Stock	Denomination	No. of marks	Closing price (p)	Change on day	1979-80 high	1979-80 low
De Beers Defd.	R0.05	14	483	+13	500	332
Cons. Gold Fields	25p	12	425	+11	429	178
Rosteoburg Plat.	R0.10	11	256	+ 2	275	94
RTZ	25p	10	346	+ 6	362	226
ICI	£1	7	363	+ 5	415	314
Racal Electronics	25p	7	198	+ 8	276	168½
Thorn Elect. 7% Cnv. 1992-99	£1	7	81	+ ½	88½	77½
West Drie.	R1	7	£31⅞	+ ⅞	£33½	£17½
Zambia Copper	$BD0.24	7	49	− 1	54	9
Anglo Amer. Gold	R1	6	£39½	+ 1	£44½	£14⅞
Burtoo A n/v	50p	6	216	− 4	332	167
Charter Cons.	2p	6	146	+ 2	148	69
Eurooean Ferries	25p	6	99	—	133	92
Kloof Gold	R1	6	£11¾	+ ½	£12¾	483
P. & O. Defd.	£1	6	113	− 3	119	71

OPTIONS

DEALING DATES

First Deal-ings	Last Deal-ings	Last Declara-tion	For Settle-ment
Jan. 7	Jan. 18	Apr. 10	Apr. 21
Jan. 21	Feb. 1	Apr. 24	May 6
Feb. 4	Feb. 15	May 8	May 19

For rate indications see end of Share Information Service

No. 6 — —8-8¹pt.— —

In a more active business than of late, call options were arranged in De Beers Defd., Northern Engineering, Burmah, Status Discount, Pittard, Highland Distilleries, Lonrho, Silvermines, North Broken Hill, J. E. Sanger, Time Products, P & O, Howard Tenens, Grattan Warehouses, Britannia Arrow, Woodside, Century Oil, Cons. Gold Fields, John Brown and Premier Oil. Puts were dooe in Loraine, Western Areas, Courtaulds and Burton A, while doubles were arranged in FNFC, Town and City, Lonrho, Cons. Gold Fields, Racal and Otter Exploration.

LONDON TRADED OPTIONS

Option	Ex'rcise price	January Closing offer	January Vol.	April Closing offer	April Vol.	July Closing offer	July Vol.	Equity close
BP	325	13	—	28	3	—	—	332p
BP	350	2	—	17	5	—	—	
BP	375	1	—	8	—	—	—	
Cons. Gold	280	146	5	155	10	166	—	424p
Cons. Gold	330	96	1	108	1	121	—	
Cons. Gold	390	38	—	58	11	85	—	
Cons. Gold	420	15	60	39	20	56	—	
GEC	300	40	8	54	—	66	—	336p
GEC	360	3	—	18	4	32	—	
Grand Met.	120	14	32	16	—	21	—	131p
Grand Met.	130	5	—	11	8	15	—	
Grand Met.	140	1	—	5	—	11	—	
ICI	330	31	5	40	10	55	—	360p
ICI	360	5	10	20	4	33	—	
ICI	390	½	—	8	—	20	—	
Land Secs.	300	1½	—	11	—	16	—	251p
Marks & Sp.	80	3	8	8	10½	10½	—	80p
Marks & Sp.	90	½	—	3½	—	6	—	
Shell	350	1½	—	8	—	15	—	317p
Totals			118		93		—	

Option	Ex'rcise price	February Closing offer	February Vol.	May Closing offer	May Vol.	August Closing offer	August Vol.	Equity close
Racal Elec.	200	13	12	18	33	—	—	199p
Racal Elec.	220	7	8	12	15	—	—	
RTZ	280	76	6	83	1	—	—	347p
RTZ	330	29	1	42	54	—	—	
RTZ	360	12	8	24	46	—	—	
Totals			71		37		1	

RECENT ISSUES

EQUITIES

[illegible]

FIXED INTEREST STOCKS

[illegible]

"RIGHTS" OFFERS

[illegible]

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimate. g Assumed dividend and yield. u Forecast dividend cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1979. Q Gross. T Figures assumed. † Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. § Placing price to public. pt Pence unless otherwise indicated. ¶ Issued by tender. || Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation, merger or take-over. || || Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ★ With warrants. †† Unlisted security. ‡‡ Issued as units comprising 2 income shares and 10 Capital shares at 125p per unit. † Dealings under special rule.

UNIT TRUST SERVICE

OFFSHORE & OVERSEAS—contd.

[illegible]

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

Abbey Unit Tst. Mngrs. (a)
72-80, Gatehouse Rd., Aylesbury 0296 5941

Abbey Amer. Gth. Tst.	46.2	48.9	-0.1	3.58
Abbey Capital	33.2	35.4	+0.2	5.81
Abbey General	44.4	47.4	+0.2	8.71
Abbey Gilt & F.I. Tst.	96.4	102.6	+0.3	3.45
Abbey Income	38.6	41.7	+0.2	8.87
Abbey Intl. Bd. Tst.	95.9	100.4	+0.3	4.98
Abbey Inv. Tst. Fnd.	42.3	44.9	+0.6	6.39
Equitas Prog. Trust	64.0	69.2	+0.5	6.8

Allen Harvey & Ross Unit Tst. Mngrs.
45, Cornhill, London EC3V 3PB. 01-623 6314.

AHR Gilt & Pref	89.5	94.2	----	13.38

Allied Hambro Group (a)(g)
Hambro Hse., Hutton, Brentwood, Essex.
01-588 2851 or Brentwood (0277) 211459

Balanced Funds				
Allied 1st	69.1	73.9	+0.5	6.50
Brit. Inds. Fund	62.9	67.3	+0.5	6.69
Growth & Income	37.1	39.7xd	+0.2	6.35
Elect. & Ind. Dev.	33.9	36.3	+0.3	5.79
Allied Capital	69.3	74.2	+0.6	5.80
Hambro Fund	106.5	114.0xd	+1.0	6.45
Hambro Acc. Fund	131.4	140.4	+1.2	5.73
Income Funds				
High Yield Fd.	65.3	69.9	+0.3	10.30
High Income	64.0	68.5	+0.4	8.32
A. H. Eq. Inc.	38.1	40.8	+0.2	8.55
International Funds				
International	26.0	28.9	+0.3	2.78
Pacific Fund	42.1	45.0xd	+0.2	2.82
Secs. Of America	56.6	60.6xd	+0.7	2.31
Specialist Funds				
Smaller Co.'s Fd.	43.5	46.5xd	+0.2	5.05
2nd Smlr. Co's Fd.	52.4	56.1	+0.1	4.81
Recovery Sits.	103.7	111.0	+0.4	6.98
Met. Min. & C'dty.	51.5	55.1	+0.4	5.32
Overseas Earnings	53.4	57.1xd	+0.5	5.95
Exempt Funds				
Far East Exempt	49.8	51.8	+0.5	3.42
Smaller Co. Exempt	67.0	70.4	+0.3	5.54
U.S.A. Exempt	100.4	104.4	+1.4	3.35

Anderson Unit Trust Managers Ltd.
158, Fenchurch St., EC3M 6AA. 623 9231

Anderson U.T.	52.6	55.8	----	6.00

Ansbacher Unit Mgmt. Co. Ltd.
1, Noble St., EC2V 7JA. 01-623 6376

Inc. Monthly Fund	142.0	150.0	.....	12.72

Arbuthnot Securities Ltd. (a)(c)
37, Queen St., London, EC4R 1BY. 01-236 5281

High Yield	39.4	[illegible]	-0.1	11.86
(Accum. Units)	63.3	[illegible]	-0.1	11.86
Extra Income Fd.	91.1	100.0	+0.1	10.98
(Accum. Units)	98.7	107.3	+0.1	10.98
High Inc. Fund	33.2	[illegible]	-0.3	10.37
(Accum. Units)	49.7	[illegible]	-0.6	10.37
(8½% W'drwl. Uts.)	43.8	[illegible]	-0.5	10.37
Preference Fund	21.4	[illegible]	----	14.06
(Accum. Units)	38.2	[illegible]	----	14.06
Capital Fund†	20.8	[illegible]	-1.4	—
Commodity Fund***	74.2	[illegible]	----	3.50
(Accum. Units)	112.4	[illegible]	----	3.50
(10% W'drwl.U.)	59.4	[illegible]	----	3.50
Fin.&Prop.Fd.*	18.7	[illegible]	.....	5.48
Giants Fund	53.6	[illegible]	+0.5	4.88
(Accum. Units)	62.1	[illegible]	+0.6	4.88
Growth Fund	31.6	[illegible]	+0.4	3.40
(Accum. Units)	40.2	[illegible]	+0.8	3.40
Smaller Co's Fd*	27.1	[illegible]	----	4.20
Eastern & Intl. Fd†	26.1	[illegible]	-0.4	1.00
(6% W'drwl.Uts.)	19.1	[illegible]	-0.3	1.00
Foreign Fund**	97.5	[illegible]	+1.4	1.71
N. Amer. & Int. Fd††	29.1	[illegible]	----	1.00
Gilt & Fixed Int.*	41.6	[illegible]	----	6.08

Dealings: †Tues. *Weds. ††Thurs. **Second Thurs. in month. ***Weekly dealing day Friday.

Archway Unit Tst. Mgs. Ltd.♥ (a)(c)
317, High Holborn, WC1V 7NL. 01-831 6233

Archway Fund	88.8	94.5xd	----	5.85

Prices at Jan. 3. Next sub. day Jan. 10.

Barclays Unicorn Ltd.♥ (a)(c)(g)
Unicorn Ho. 252, Romford Rd., E7. 01-534 5544

Unicorn America	29.5	[illegible]	[illegible]	2.04
Do. Aust. Acc.	62.2	[illegible]	[illegible]	1.56
Do. Aust. Inc.	71.1	[illegible]	[illegible]	1.56
Do. Capital	68.2	[illegible]	[illegible]	5.71
Do. Exempt Tst.	107.3	[illegible]	[illegible]	7.25
Do. Extra Income	26.7	[illegible]	[illegible]	9.99
Do. Financial	73.1	[illegible]	[illegible]	4.74
Do. 500	81.2	[illegible]	[illegible]	6.85
Do. General	33.3	[illegible]	[illegible]	6.99
Do. Growth Acc.	45.9	[illegible]	[illegible]	5.18
Do. Income Trust	84.7	[illegible]	[illegible]	7.92
Do. Prf. A'ns. Tst.	178.8	[illegible]	[illegible]	4.28
Do. Recovery	46.5	[illegible]	[illegible]	6.76
Do. Trustee Fund	115.7	[illegible]	[illegible]	6.25
Do. W'dwide Tst.	47.0	[illegible]	[illegible]	3.62
B'tst.In.Fd.Inc.	60.4	[illegible]	[illegible]	6.68
Do. Accum.	73.4	[illegible]	[illegible]	6.68

Baring Brothers & Co., Ltd.♥ (a)(x)

[illegible]

Discretionary Unit Fund Managers
22 Blomfield St., EC2M 7AL. 01-638 4485

Dis. Inc. Dec. 27	176.8	188.5	----	6.26

E. F. Winchester Fund Mngt. Ltd.
44, Bloomsbury Square, WC1A 2RA 01-623 8893

Great Winchester	17.6	19.3	----	6.01
Gt. Winchester O'seas	19.6	21.0	----	2.52

Emson & Dudley Tst. Mngmnt. Ltd.
20b Albemarle St., W1. 01-493 3211

Emson Dudley Tst.	69.7	74.5	----	6.00

Equity & Law Un. Tr. M.♥ (a)(b)(c)
Amersham Rd., High Wycombe. 0494 33377

Equity & Law	68.7	72.3	+0.7	5.40

Fidelity International Management Ltd.
62-63, Queen St., London, EC4R 1AD. 01-248 4891

American	24.2	25.5	+0.3	1.0
Fixed Interest	24.1	25.4	+0.1	13.2
Growth & Income	25.7	27.1	+0.6	8.00
Special Sits.	24.9	26.2	+0.2	3.0

James Finlay Unit Trust Mngt. Ltd.
10-14, West Nile Street, Glasgow. 041-204 1321

J. Finlay Internat'l	26.0	28.0	----	2.40
Accum. Units	31.6	33.9	----	2.40
J. Finlay High Income	32.0	34.4	----	9.84
J. Finlay Euro.Fin.	24.0	25.8	----	3.48
Accum. Units	29.6	31.9	----	3.48
J. Finlay Fd.In.Tst.	28.3	30.4	----	5.78
Accum. Units	34.2	36.7	----	5.78

Prices on Jan. 3. Next dealing Jan. 9.

Framlington Unit Mgt. Ltd. (a)
64, London Wall, EC2M 5NQ. 01-628 5181

American	50.2	53.4	-1.2	1.37
American Turnaround	50.4	53.4	-0.8	2.00
Capital Tst.	47.6	50.6	+0.4	5.36
(Accum. Units)	47.6	50.6	+0.4	5.36
Income Tst.	33.6	35.6xd	+0.2	8.96
Int. Growth Fd.	40.4	42.8	+0.6	2.35
(Accum. Units)	42.6	45.2	+0.6	2.35

Friends' Provdt. Unit Tr. Mgrs.♥
Pixham End, Dorking. 0306 5055

Friends Prov. Units	44.5	47.5	+0.5	5.37
Do. Accum.	61.3	65.5	+0.8	5.37

Funds in Court*
Public Trustee, Kingsway, WC2. 01-405 4300

Capital Jan. 4	103.4	104.9	----	5.53
Gross Inc. Jan. 4	69.8	70.5xd	----	11.77
High Yield Jan. 4	80.6	82.5	----	10.42

*Unauth. Restricted to monies under Court control.

G.T. Unit Managers Ltd.♥
16 Finsbury Circus, EC2M 7DD 01-628 8131

G.T. Cap. Income	101.4	107.8	----	3.80
Do. Acc.	125.8	133.8	----	3.80
G.T. Inc. Fd. Un.	161.1	171.3	----	8.90
G.T. U.S. & Gen.	138.5	147.0	----	2.50
GT Wld. Bd. Fd.	98.0	100.7	----	5.30
G.T. Japan & Gen.	72.5	76.7	----	2.80
‡GL Pens.Ex.Fd.	225.1	236.3	+0.3	2.6
G.T. Int'l. Fund	161.4	171.7	----	2.00
G.T. Four Yds. Fd.	45.6	48.5	-1.7	9.10
G.T. Far East & Gen.	50.1	53.8	----	3.50

G. & A. Trust (a) (g)
5 Rayleigh Road, Brentwood. (0277) 227300

G. & A.	32.9	35.1	+0.3	5.93

Gartmore Fund Managers♥ (a)(g)
2 St. Mary Axe, EC3A 8BP 01-623 6114
Dealing only: 01-623 5766/5806

American Trust	25.8	27.7xd	+0.7	1.01
British Tst. (Acc.)	55.8	60.1	----	4.71
Commodity Share	35.9	38.7xd	+0.7	3.79
Extra Income Tst.	20.7	22.3	+0.2	10.52
Far East Trust	31.7	34.1	-0.2	3.24
High Income Tst.	51.1	55.0	+0.4	10.78
Income Fund	67.6	72.7	+0.2	8.10
Ins. Agencies	£13.30	14.22xd	+0.07	4.89
Intl. Exempt Fd.	84.9	92.5	+0.6	7.89
Intl. Tst. (Acc.)	31.3	33.7	+0.3	1.38
Special Sits. Tst.	24.2	26.1	-0.1	3.25

Gibbs (Antony) Unit Tst. Mgs. Ltd. (a)
3 Frederick's Pl., Old Jewry, EC2 01-588 4111

Extra Income	27.5	29.9	+0.1	10.80
Income	38.6	42.0	----	10.49
Accumulation	69.3	75.4	----	4.40
Growth	39.8	43.3xd	+0.2	5.30
Capital	40.5	44.0xd	+0.3	4.70
Small Co's	41.7	45.4	----	4.90
Technology	61.5	66.9	+0.3	3.80
Private	40.6	44.2	----	5.60
Intl. Erns. & Assets	45.9	49.9xd	----	4.20
American	25.9	27.9	+0.6	2.30
Far East & Gen.	27.5	29.6xd	----	2.40

Govett (John)♥
77 London Wall, EC2 01-588 5620

Stockholder Dec. 28	113.8	119.9xd	----	3.08
Do. Accum. Unit	141.3	148.9	----	3.08

Next dealing Jan. 18.

Grieveson Management Co. Ltd.
59 Gresham Street, EC2P 2DS 01-606 4433

Barrington Jan. 2	232.5	243.0	----	5.85
(Accum. Units)	262.9	274.8	----	5.85
Barrgtn. H.Y. Jan. 3	157.2	164.7xd	----	11.07
(Accum. Units)	203.4	213.0	----	11.07
Barrgtn.Sm.Cos.Fd.	97.9	102.6	----	6.54
Endeav Dec. 31	251.7	260.5	----	2.35
(Accum. Units)	267.8	277.2	----	2.35
Grenchstr. Jan. 4	88.9	92.4xd	----	3.30
(Accum. Units)	95.2	98.9	----	3.30
Ln. & Bruss. Jan. 2	70.0	72.5xd	----	4.85
(Accum. Units)	76.8	79.5	----	4.85

[illegible]

INSURANCE PROPERTY BONDS

[illegible]

OFFSHORE & OVERSEAS FUNDS

[illegible]

Continued on previous page

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FT SHARE INFORMATION SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

Five to Fifteen Years

Over Fifteen Years

Undated

INTERNATIONAL BANK

CORPORATION LOANS

COMMONWEALTH & AFRICAN LOANS

LOANS

Public Board and Ind.

Financial

High	Low	Stock	Price	+ or -	Int.	Red.
103¾	96	FFI 13pc 1981	97½	+¼	13.33	15.38
108¼	94	Do. 14pc '83	95	+¼	14.73	15.71
86½	77½	ICFC 5½pc Deb. '80-82	80¾	......	6.95	15.25
85	69	Do. 6¼pcDb. '81-84	71½	......	8.87	14.89
99	79½	Do. 10½pc Uns.Ln. '86	80½xd	......	13.04	15.60
99	79	Do. 11pc Uns.Ln. '88	80xd	......	13.75	14.90
101½	80	Do. 11¾pc Uns.Ln. '90	82½xd	+½	14.24	15.20
72½	54½	Do. 7¼pcADeb. '89-92	56	......	13.17	15.30
69	53	Do. 7¼pcA Db. '91-94	56	......	13.52	15.20
67½	64	Do. 9pc'A' '91-94	67	......	14.83	15.20
78½	61½	Do. 8¾pcLn. '92-97	64½	......	14.64	15.30
102	85	Do. 12½pc Uns. Ln. 1992	88½	......	14.57	—

FOREIGN BONDS & RAILS

AMERICANS

CANADIANS

BANKS AND HIRE PURCHASE

High	Low	Stock	Price	+ or -	Div. Net	Cvr	Y'ld Gr's	P/E
224	121	Com'l Aus. ($A1)	131	......	Q18c	3.0	7.0	4.7
*£17	903	Com'zbk DM 10	910xr	+7	Q26.6%	—	7.6	—
£18½	900	C'hgn.Hbk.Kr100	975	......	Q12%	—	11.4	—
41	20	Corinthian 10p	31	+1	†1.05	5.9	4.8	3.6
£24¼	£15	Cred. France F75	£18	−½	Q9.87%	—	3.6	—
11	3	Dawes (G. R.)	9	......	—	—	—	—
*£119½	£62½	Deutsche Bank DM50	£66¼	+½	Q28.12%	—	5.5	—
90	55	F. C. Finance	58	......	2.2	4.9	5.4	5.4
10¼	5¼	First Nat. 10p	10	......	—	—	—	0.7
4	1½	Do. Wrts. 75-83	2¼	......	—	—	—	—
266	178	Gerrard Natnl	204	......	†9.12	—	6.4	—
74	38	Gibbs (A.)	72	......	2.2	—	4.4	—
270	185	Gillett Bros. £1	190	......	†16.95	—	12.7	—

BANKS & HP—Continued

Hire Purchase, etc.

BEERS, WINES AND SPIRITS

BUILDING INDUSTRY, TIMBER AND ROADS

CHEMICALS, PLASTICS

CHEMICALS, PLASTICS—Cont.

DRAPERY AND STORES

ELECTRICALS

ENGINEERING MACHINE TOOLS

ENGINEERING—Continued

FOOD, GROCERIES, ETC.

FOOD, GROCERIES—Cont.

HOTELS AND CATERERS

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[illegible]

EASTERN RAND

[illegible]

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[illegible]

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[illegible]

FINANCE

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MINES—Continued

CENTRAL AFRICAN

1979-80 High	Low	Stock	Price	+ or −	Div. Net	Cvr	Yld Gr's
575	132	Falcon Rh.50c	575	+15	Q100c	ϕ	12.0
48	11	Rhod'n Corp. 16½p	46	......	0.56	6.5	1.7
260	70	Roan Cons. K4	260	+10	Q0.125	ϕ	2.9
67	26	Wankie Col. Rh.1	60	−1	Q9c	1.5	10.3
54	9	Zam.Cpr.SBD0.24	49	−1	—	—	—

AUSTRALIAN

[illegible]

TINS

[illegible]

COPPER

142	56	Messina R0.50	138xd	+2	Q10c	ϕ	4.1

MISCELLANEOUS

81	54	Barymin	60	−2	—	—	—
14½	10	Burma Mines 17½p	12	......	—	—	—
380	170	Cons. Murch. 10c	370xd	+5	Q100c	ϕ	15.5
470	280	Northgate C$1	440	−20	—	—	—
362	226	R.T.Z.	346	+6	†11.5	3.4	4.8
31	12	Robert Mines	19	+2	—	—	—
65	26	Sabina Inds. C$1	37	+1	—	—	—
880	470	Tara Expln. $1	540	+20	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on the basis of net distribution; bracketed figures indicate 10 per cent. or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distributions and rights.

- ● "Tap" Stock.
- ● Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- ϕ Figures or report awaited.
- †† Unlisted security.
- ‡ Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividends or forecasts.
- ϕ Merger bid or reorganisation in progress.
- ϕ Not comparable.
- ϕ Same interim: reduced final and/or reduced earnings indicated.
- § Forecast dividend; cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ★ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ϕ Excluding a final dividend declaration.
- ϕ Regional price.
- || No par value.

§§ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1979-80. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1978-79. K Figures based on prospectus or other official estimates for 1979-80. M Dividend and yield based on prospectus or other official estimates for 1980. N Dividend and yield based on prospectus or other official estimates for 1979. P Figures based on prospectus or other official estimates for 1978-79. Q Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xR ex capital distribution.

"Recent Issues" and "Rights" Page 30

REGIONAL MARKETS

The following is a selection of London quotations of shares previously listed only in regional markets. Prices of Irish issues, most of which are not officially listed in London, are as quoted on the Irish exchange.

Albany Inv. 20p	26	......
Bertam	16	......
Bdg'wtr. Est. 50p	345	......
Clover Croft	38	+3
Craig & Rose £1	£10½	......
Dyson (R. A.) A	7	......
Fife Forge	43	......
Finlay Pkg. 5p	19	......
Graig Ship. £1	800	−20
Higsons Brew	78	......
Holt (Jos) 25p	255	......
I.O.M. Stm. £1	160	......
Pearce (C. H.)	350	−3
Peel Mills	29	......
Sheff. Refrshmt	98	......
Sindall (Wm.)	165	......

IRISH

Conv. 9% '80/82	£85¼	......
Nat. 9¾% 84/89	£69xd	......
Fin. 13% 97/02	£82½	+¼
Alliance Gas	66	......
Arnott	340	......
Carroll (P.J.)	53xd	+2
Clondalkin	85	+2
Concrete Prods.	88	......
Helton (Hldgs.)	31	......
Ins. Corp.	200	......
Irish Ropes	72½xd	......
Jacob	33	......
T.M.G.	140	+5
Unidare	80	......

OPTIONS

3-month Call Rates

Industrials

A. Brew	8
BOC Intl.	6
B.S.R.	5
Babcock	12
Barclays Bank	30
Beecham	13
Blue Circle	25
Boots	17
Bowaters	16
B.A.T.	25
Brown (J.)	7½
Burton 'A'	25
Cadburys	5½
Courtaulds	8
Debenhams	8
Distillers	21
Dunlop	6
Eagle Star	14
E.M.I.	12
Gen. Accident	21
Gen. Electric	35
Glaxo	40
Grand Met.	13
G.U.S. 'A'	38
Guardian	23
G.K.N.	22
Hawker Sidd.	16
House of Fraser	14
I.C.I.	20
"Imps"	8
I.C.L.	45
Inveresk	5
KCA	3½
Ladbroke	17
Legal & Gen.	14
Lex Service	11
Lloyds Bank	24
"Lofs"	3½
London Brick	6
Lonrho	6
Lucas Inds.	28
"Mams"	15
Mrks. & Spncr	10
Midland Bank	30
N.E.I.	3
Nat. West. Bank	28
P & O Dfd.	10
Plessey	10
Racal Elect.	22
R.H.M.	4½
Rank Org.	18
Reed Intnl.	17
Sears	5½
Spillers	4½
Tesco	7
Thorn	35
Trust Houses	14
Tube Invest.	27
Unilever	40
U.D.T.	4
Utd. Drapery	10
Vickers	18
Woolworths	6½

Property

Brit. Land	7
Cap. Counties	9
Land Secs.	25
MEPC	17
Peachey	13
Samuel Props.	14
Town & City	2

Oils

Brit. Petroleum	35
Burmah Oil	15
Charterhall	3
Premier	4
Shell	30
Ultramar	22

Mines

Charter Cons.	16
Cons. Gold	32
Rio T. Zinc	26

A selection of Options traded is given on the London Stock Exchange Report page

FINANCIAL TIMES
Tuesday January 8 1980

PolyGram expected to buy Decca music division

By John Lloyd

AGREEMENT on the sale of Decca's music division to PolyGram, the record company jointly owned by Philips of Holland and Siemens of West Germany, is expected this week. It is believed that PolyGram will insist that more than 1,000 of the division's 1,200 staff be made redundant.

No price has been put on Decca's music interest, though it is expected to be between £10m and £12m.

Other labels

PolyGram is likely to retain the Decca name, and continue to market it beside other labels within the group such as Polydor, Deutsche Grammophon Gesellschaft, Philips and Mercury.

However, PolyGram is unlikely to require Decca's pressing capacity, so the division's employees at its New Malden factory would be laid off.

Decca made a pre-tax loss last year of £384,000, compared with a profit of more than £12m in the previous year. The music division's losses last year were £1.8m.

The company has a strong classical repertoire, but has lost the strength it had in popular music. All record companies have suffered from a depressed market in recent years.

Speculation

There has been some speculation that the sale of the record division will open the way for a takeover bid for the remainder of Decca, which is made up largely of navigational, radar and television interests.

Both the General Electric Company (GEC) and Racal have been tipped as possible bidders for Decca. Racal made no comment last night on reports that an informal agreement has been made between the chairman of the two companies, Sir Edward Lewis of Decca and Mr. Ernest Harrison of Racal.

Pressure on margins as input prices leap

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

THE COST of industry's raw materials is rising much faster than the wholesale output prices charged for manufactured products.

With other costs such as labour and interest charges also up sharply this suggests an intensification of the squeeze on industry's profit margins over the last few months.

Department of Industry figures published yesterday show raw material costs rose 12.1 per cent in the second half of last year compared with 7.1 per cent increase in output prices. The gap has widened in recent months because the rate of increase of output prices has slackened since last summer. The three-month rate of change has slipped from 5.1 to 2.7 per cent since August.

This trend probably reflects the competitive pressures which are limiting the extent to which cost increases can be passed on to the consumer.

The build-up of cost increases, notably oil, could lead to a faster rate of price increase in the coming months. There is also a seasonal pattern since many manufacturing companies adjust their list prices in January.

These figures suggest there will not be a runaway acceleration in the 12-month rate of retail price inflation—currently

WHOLESALE PRICES
(1975=100)

		Materials and fuel purchased	Output (Home sales)
1979	1st	153.4	161.6
	2nd	163.3	168.0
	3rd	169.9	176.4
	4th*	183.6	181.6
	Sept.	172.5	178.2
	Oct.	178.1	180.3
	Nov.*	186.1	181.5
	Dec.*	186.7	183.0

* Provisional
Source: Department of Industry

17.4 per cent. But increases in the mortgage rate and various public sector charges will probably be aufficient to help push the 12-month rate above 20 per cent by the early summer.

The monthly pattern of wholesale prices has been distorted by revisions to the data. These have resulted principally in an upward revision of over 3 per cent in the raw materials cost index for November, to take account of the backdating of the crude oil price increases announced in December.

The materials and fuel cost index rose 0.3 per cent to 186.7 (1975=100) in December following a 4.5 per cent increase in the previous month. The rise in December would have been much larger but for a 3 per cent appreciation in the average value of sterling against the dollar, which offset some of the higher oil prices.

This index rose by 25.9 per cent in the 12 months to December compared with a 15.6 per cent increase in the output prices index over the same period.

The output price index rose 0.8 per cent to 183.0 (1975=100) in December. This was less than most analysts expected.

There was a similar rise in the price index for manufactured products other than food, drink and tobacco with rises spread across most sectors.

The cost of materials and fuel bought by non-food manufacturing companies rose about 0.5 per cent last month. This index rose 37 per cent in the 12 months to December. Tha increase would have been 45 per cent if sterling had been unchanged during the year rather than higher.

There was virtually no change last month in the cost of Lower prices for materials purchased by food manufacturing companies. were offset by higher prices for imported cereals and sugars. Prices charged by these companies increased 1.4 per cent.

Higher prices for bread and flour confectionery and bacon curing, meat and fish products accounted for two-thirds of the rise.

Mrs Gandhi heads for her biggest victory

By David Housego in New Delhi

MRS. INDIRA GANDHI, swept from power only three years ago, appeared last night to be beading for the largest electoral victory in her political career and a position of unchallengeable personal supremacy in the new parliament.

It seemed doubtful whether any of the other political parties would be able to muster single-handedly the 54 seats needed in the parliament to constitute an official opposition to Mrs. Gandhi's Congress party.

With 265 results declared in a parliament of 542 seats, her party had won 205, Mr. Jagjivan Ram's Janata party 12 and the Lok Dal, led by Mr. Charan Singh, tha incumbent Prime Minister.

Mrs. Gandhi's personal triumph was by her massive 200,000 majority in the Medak constituency in the southern state of Andhra Pradesh. Mrs. Gandhi is also contesting from her traditional base, Rae Bareli in the north, where she had also established a strong lead. Her son Sanjay and other associates most closely associated with implementing the 1975-77 emergency also seem likely to be returned with strong majorities.

The unexpected scale of Mrs. Gandhi's victory has eroded the traditional differences between the Northern Hindi-speaking belt and Thedravidian states sonth of the Vindhya mountains, as well as regional differences. Mrs. Gandhi won landslide victories in the Punjab, in North Gujerat in the west, Orissa in the east and Karnataka in the south.

She also performed strongly in the traditional regionalist state of Tamil Nadu. The only state firmly holding out against her was West Bengal, where the Marxists have established a strong lead.

The size of her victory in the key Hindi-speaking states of Bihar and Uttar Pradesh was still unclear, the changeover was interpreted yesterday as India's strongly-rooted democracy paradoxically voting for a return to strong government and possibly authoritarian rule

But the scale of Mrs. Gandhi's defeat in 1977 was also being recalled as a warning that the electorate would not tolerate a repetition of the high-handed misuse of power that occurred under the emergency.

Mrs. Gandhi said yesterday that her two priorities were restoring law and order and controlling inflation as part of improving the economic situation.

Background, Page 3
Editorial Comment, Page 18

THE LEX COLUMN

The ball lands in Bowring's court

Bowring must be rueing the day that it proposed to Marsh and McLennan of the U.S. that the two groups should pool their insurance broking interests. Having announced just before Christmas that it was considering an outright offer, Marsh now says that it will bid the equivalent of about 169p per share provided Bowring does not "seek to frustrate the deal. The UK company has been attempting to usa the courts to ward off Marsh's unwelcome attentions.

It would be difficult for Bowring to reject these terms out of hand on financial grounds. Three weeks ago its shares stood at 110p, and its earnings for 1979 could be around 13p per share fully diluted and taxed. Up to half the proposed bid would be financed with cash and the rest with equity—the first major takeover in which a foreign hidder has taken advantage of the removal of UK exchange controls. Marsh itself stands on a 1979 p/e of around 11¼, and if the deal goes through over a fifth of its equity could end up in UK hands.

The big question is how the Committee of Lloyd's would react to an opposed bid for Bowring. If Lloyd's bends the rules which effectively block foreign ownership of more than a fifth of one of its member brokers, it could open the door to a string of other foreign bids for UK brokers. If it does not, it risks causing major offence in the U.S., its biggest market place.

It is in everyone's interest to find an amicable way out of this impasse. Meanwhile the market is taking a suitably cantions view with Bowring's shares standing at 142p.

Globe/W. of England

Globe Investment Trust's absorption of the Tyndall fund management group, via a takeover of West of England Trust, marks the third change of control of a major unit trust group within the past few weeks.

Index rose 6.0 to 419.9

Rothschild Investment Trust took over Dawnay Day, Kleinwort Benson's stake in M and G could rise to 51 per cent, if it takes up all its options, and now Globe is offering £18m in Convertihle for West of England. With Britannia Arrow, a would-be buyer of Dawnay Day, nibbling at West of England's shares during the autumn, it looks as though Globe has decided it should move quickly.

The tussle over Dawnay Day, centring on its Target life assurance subsidiary, will have helped West of England in negotiating a price for its life interests, which are in healthy acturial surplus. So the 90p price for West of England appears to be around twice net asset valne of 47p which implies slight dilution for Globe—a disadvantage it is trying to cushion through the use of Convertible. The question now is what the deal implies for the management style of Globe. Presumably it marks an attempt to break away from a aomewbat stodgy image as the giant of the investment trust sector.

Index-linking

We are all grannies now in the bond market, or shall be if Mr. David Wilkie of Standard Life bas his way. Yesterday, having expounded his arguments in favour of the index-linking of Government debt to a seminar organised by hrokers Laurie, Milbank, Mr. Wilkie invited the fund managers in his audience to indicate what sort of real interest rate, over and sbove the indexation of capital, wonld induce them to buy a 20-year bond. The consensus view was around 3½ per cent for a gross fund, falling to 1 per cent for a private high taxpayer.

This sounds really rather greedy in the light of recent market performance. Perhaps the fund managers bave become complacent about the returns that may be achieved in the fixed-interest market this year, or perhaps it was all a bluff for the benefit of the representative of the Bank of England who was present. It seems more likely that a long-dated 2 per cent stock with interest and capital payments tied to retail prices wonld sell ont in seconds.

Mr. Wilkie fears that a single, experimental issue would be hid up to a high premium by surtax payers; provided always that the monetary capital gains resulting from index-linking were to remain tax free. He wonld like to see a wholesale move to index-linking through the offer of conversion terms on every single gilt-edged stock.

Mr. Wilkie's proposals were openly opposed by a representative of the building societies, which might find it very bard work competing for deposits against indexed securities. There was also deep general suspicion that the authorities could not be trusted not to rig the RPI.

In theory, the issue of indexed gilts should not necessarily lead to demands for indexation of, say, wages; no trade union or employer would accept the sort of long-term contract, not open to re-negotiation, that a bond represents. But there is a threat of growing pressure on the non-indexed parts of the economy if real GDP falls and the indexed sectors take an ever larger real share.

Wholesale prices

Don't be deceived by the fact that manufacturers' input prices rose by only 0.3 per cent in December. In fact yesterday's wholesale price indices imply that the squeeze on company profitability is even sharper than has been thought. The March and November revisions mean that input prices over the past year have outstripped output prices by 10 ratlier than 5 per cent.

Front commanders offer to shoot unruly guerrillas

BY QUENTIN PEEL IN SALISBURY

PATRIOTIC FRONT guerrilla commanders, yesterday offered to shoot any of their own "unruly elements" who disregarded the Rhodesian cease-fire, if ordered to do so by Lord Soames, the British Goveroor.

The offer followed a strong attack by a senior Front spokesman on the Governor's decision to deploy Rhodesian security forces to combat lawlessness.

Mr. Dumiso Dabengwa, Chief of Security and Intelligence for Zipra, Mr. Joshua Nkomo's military wing of the Front forces, said they were now legal forces under the authority of the Governor, and as such could be called on to protect the cease-fire. "It it means a shoot-ont with our own unruly elements, then we certainly will," be said.

Earlier, Mr. Joseph Msika, secretary-general of Mr. Nkomo's Zapu party, and the most senior Front politician now in Rhodesia, said the British Governor's decision to deploy the Rhodesian security forces was a hreach of the cease-fire.

The Governor's agreement to allow South African troops to remain inside Rhodesia, guarding the Beit Bridge border crossing to South Africa, was a breach of British undertakings during the Lancaster House conference.

A senior British official aaid any forces which accepted the authority of the governor could be called on to maintain the ceasefire. "The use of the Patriotic Front forces is not excluded. The use of the Patriotic Front command structure is a daily occurence."

Mr. Dabengwa said the Front's military commanders had relnctantly called a press conference to answer charges that their men were not respecting the ceasefire, and were responsible for numerous violations. The Front has shown good faith, becanse 19,400 guerrillas had reported to assembly places, but a further 2,000 to 3,000 guerrillas in the country had still not reported.

"If yon refuse our orders, then let it be clear to you that you have placed yourself outside our control and therefore be prepared to face the consequences of your actions."

As evidence of the difficulties still facing the successful of the assembly of the guerrillas, a British representative said a group of betwaen 40 and 500 came face to face with the Rhodesian police early yesterday, when they arrived at a rendezvous point, but refused to give np their arms.

The Governor has announced that any guerrilla reporting after last Friday's deadline must surrender his arms. The men, from Mr. Robert Mugabe's Zanla wing of the Front forces, refused to disarm until Mr. Rex Nhongo, deputy commander of Zanla, intervened.

The representative said: "Working relations with Zipra are excellent. Working relations with Zanla have been somewhat strained during the day." He said that in a meeting with Sir Antony Duff, the daputy governor, yesterday the commanders of both Front wings expressed their disquiet over some issues.

They were unhappy about the use of auxiliaries—scantily trained paramilitary forces initially recruited by the outgoing Prime Minister Bishop Abel Muzorewa. He admitted they were being used to back up the police but said: "To present the incidents of difficulties with auxiliaries as if they were a countrywide phenomenom is misleading?"

Continued from Page 1

Bowring

versial 20 per cent ruling of Lloyd'a. This stipulates that insurance interests outside the Lloyd's market could not normally hold more than 20 per cent of a Lloyd's broker.

The suddenness of the Marsh move yesterday haa thrown Lloyd'a into confusion abont its 20 per cent ruling. Lloyd's is relnctant to antagonise Marsh sinca the U.S. concern provides up to a balf of Lloyd's total U.S. business through insurance and reinsurance. Marsh also provides Bowring with between one fifth and a quarter of its total broking revenues.

Last night Lloyd's said there was no need for it to act yet.

Before it proceeds with its offer Marsh will need further approval from its Board and clearance by tha U.S. authorities.

The U.S. group has given Bowring seven days to respond to the proposal. Marsh has told the Bowring Board that "should you not respond favourably, we reserve the right to proceed or not proceed with such an offer, or another offer, in the discretion of our Board of directors."

Continued from Page 1

Troops in Afghanistan

snows bave slowed down fighting in the strategic north-eastern Afghan province of Badakhshan, but in at least four other provinces the Soviet troops are continuing to meet strong resistance.

Much of Badakhshan, a thin strip of land bordared by the Soviet Union, China and Pakistan, remains in the hands of rebels. Soviet paratroopers bave been dropped there, according to observers in Kabul.

The central province of Bamiyan — a stronghold of Hazara tribesmen for several months—reportedly remains cut off from the rest of the conntry.

Villagers bave blocked at least one main road with a landslide, while snow is making a number of mountain roada impassable.

Rebels claimad in Pakistan yesterday that their forces, assisted hy desertera from tbe Afghan army, had gained control of two towns in Laghman province, east of the capital of Kahnl. They said 30 enemies, including Soviet soldiers, had been killed in the attack.

● Our UN correspondent adds: Six states of the third world presented a resolution in the Security Conncil yesterday aimed at the immediate and unconditional withdrawal of Soviet troops from Afghanistan, but lwthout mentioning the Russians by name.

The draft, submitted by Bangladesh, Jamaica, Niger, the Philippines and Zambia, referred to "all foreign troops," but the sponsors left no doubt that they meant Soviet soldiers.

As the resolution appeared certain to be vetoed by the Soviet delegation, Mr. Oleg Troyanovsky, Bangladesh and the Philippines prepared a second resolution against this probability — to transfer tha qnestion to the General Assembly st a special emergancy session.

New technology 'must be introduced faster'

BY CHRISTOPHER LORENZ, MANAGEMENT EDITOR

BRITAIN must speed up the introduction of new technology if it is to survive as a trading nation in the face of intensifying world competition, a Cabinet Office report on technological change warns today.

Severe threats are posed to the UK's markets by the larga improvements in productivity which its competitors could achieve with new technology, and by the growing challenge in traditional products from low-wage developing countries, says the report of the Government's Advisory Council for Applied Research and Development—ACARD.

Emphasising that the adoption of new technologies, including microprocessors, can create jobs as well as destroy them, it says Britain must identify those industries which have most chance of success, and rapidly foster them by concentrating its resources there.

It does not use the phrase "picking likely winners," but it clearly supports such a policy. In particular, it recommends that the National Economic Development Council should develop technological strategies for different sectors of industry, and that Government-supported Research and Development programmes should then be linked with thesa atrategies.

It also urges the Department of Industry to study bow the Government can best foster tha rapid developmant of new industries hased on emargent technologies, "in particular information technology and biotechnology," as well as industries with a high growth potential because of tha increasing need to conserve energy and materials.

Among its more specific proposals, ACARD advocates the greater use by industry of foreign technology, in the form of licences and patents, and recommends the Department of Industry to examine the case for establishing a new agency to promote this, or getting an existing one to take on the task.

The report was prepared by a working group under Sir Jamea Menter, FRS, Principal of London University's Queen Mary College, and previously research and development director of Tube Investments.

ACARD's recommendations include greater public sector responsibility for training in industry, the undertaking of more research and development in the service sector; Government measures to help small firms spend more, research and fiscal incentives for large firms to seek out or set up small ones to exploit some of their unwanted research and development results.

Mora generally, ACARD asks the Government to examine bow industrial enterprises can be encouraged to strengthen their research activities, and to consider how small firms might benefit more from government and other consultancy services in technology.

* *Technological Change: Threats and Opportunities for the United Kingdom. Cabinet Office Advisory Council for Applied Research and Development, December 1979, HMSO £1.75.*

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Weather

UK TODAY

MOSTLY dry, sunny intervals; wintry showers in E, colder.

London, S.E. and E. England, E. Anglia
Cloudy, wintry showers, cold. Max. 4C (39F).

Cent. S and Cent. N. England, Midlands
Cloudy, bright intervals. Max. 5C (41F).

Channel Isles, S.W. England
Rain, becoming mostly dry with bright intervals. Max. 7C (45F).

Wales, N.W. England, Lakes, I. of Man, S.W. Scotland, Glasgow, N. Ireland
Dry, freezing fog, sunny intervals later. Max. 5C-6C (41F-43F).

N.E. England, Borders, Edinburgh, Dundee, Aberdeen, Cent. Highlands
Cloudy, wintry showers, bright intervals. Cold. Max. 3C-4C (37F-39F).

Moray, N.E. Scotland, Orkney, Shetland
Wintry showers, sunny intervals. Max. 2C (36F).

Argyll, N.W. Scotland
Sunny inlervals. Max. 5C-6C (41F-43F).

Outlook: Cold, wintry showers

WORLDWIDE

		Y'day midday °C	°F			Y'day midday °C	°F
Ajaccio	C	12	54	London	C	7	45
Algiers	S	17	63	Luxmbg.	R	1	34
Amsdm.	C	4	39	Luxor	S	18	64
Athens	S	13	55	Madrid	F	3	37
Bahrain	C	19	66	Majorca	S	14	57
Barcina.	S	9	48	Malaga	S	15	59
Beirut	S	16	61	Malta	S	15	59
Belfast	C	1	34	M'chstr.	S	6	43
Berlin	Sn	−2	28	Melbne.	S	22	72
Biarritz	S	11	52	Mex. C.	S	21	70
Bmghm.	C	5	41	Milan	Fg	−2	28
Blackpl.	F	5	41	Mntreal.	Sn	−1	30
Bordx.	C	12	54	Moscow	S	−8	18
Boulgn.	C	8	43	Munich	Sl	2	36
Bristol	S	5	41	Nairobi	S	24	75
Brussels	C	5	41	Naples	S	8	46
Budpst.	Sn	−5	23	Nwcstl.	C	5	41
B. Aires	S	29	84	N. York	C	3	37
Cairo	S	18	64	Nice	S	11	52
Cardiff	S	5	41	Nicosia	R	15	59
Cas'b'ca	S	16	61	Oporto	F	13	55
Cape T.	S	23	73	Oslo	Sn	−3	27
Chicago	F	−9	15	Paris	C	6	43
Cologne	R	7	45	Perth	F	23	73
Cpnhgn.	Sn	−1	30	Prague	Fg	−2	28
Corfu	R	10	50	Reykjvk.	Sl	2	36
Dublin	F	4	39	Rhodes	R	12	54
Dbrvnk.	C	8	43	Rio J'o	S	25	77
Ednbgh.	C	6	43	Rome	S	10	50
Faro	C	14	57	Salzbrg.	Sn	1	34
Florence	F	5	41	Singapr.	R	26	79
Frankft.	C	4	39	Stckhm.	Sn	−1	30
Funchal	R	14	57	Strasbg.	R	5	41
Geneva	C	5	41	Sydney	R	20	68
Gibrltr.	S	15	59	Tangier	S	16	61
Glasgow	F	6	43	Tel Aviv	S	15	59
G'rnsey	S	8	46	Tenerife	F	13	55
Innsbrk.	Sn	0	32	Tokyo	S	11	52
H. Kong	S	17	63	Toronto	C	0	32
Invrnss.	C	5	41	Tunis	F	14	57
I.o Man	F	7	45	Valencia	S	11	52
Jersey	S	9	48	Venice	S	4	39
Jo'burg	C	20	68	Vienna	C	−4	25
L. Plms.	S	18	64	Warsaw	C	−5	23
Lisbon	S	10	50	Zurich	Sl	1	34
Locarno	F	3	37				

C—Cloudy. F—Fair. Fg—Fog. R—Rain. S—Sunny. Sl—Sleet. Sn—Snow.

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